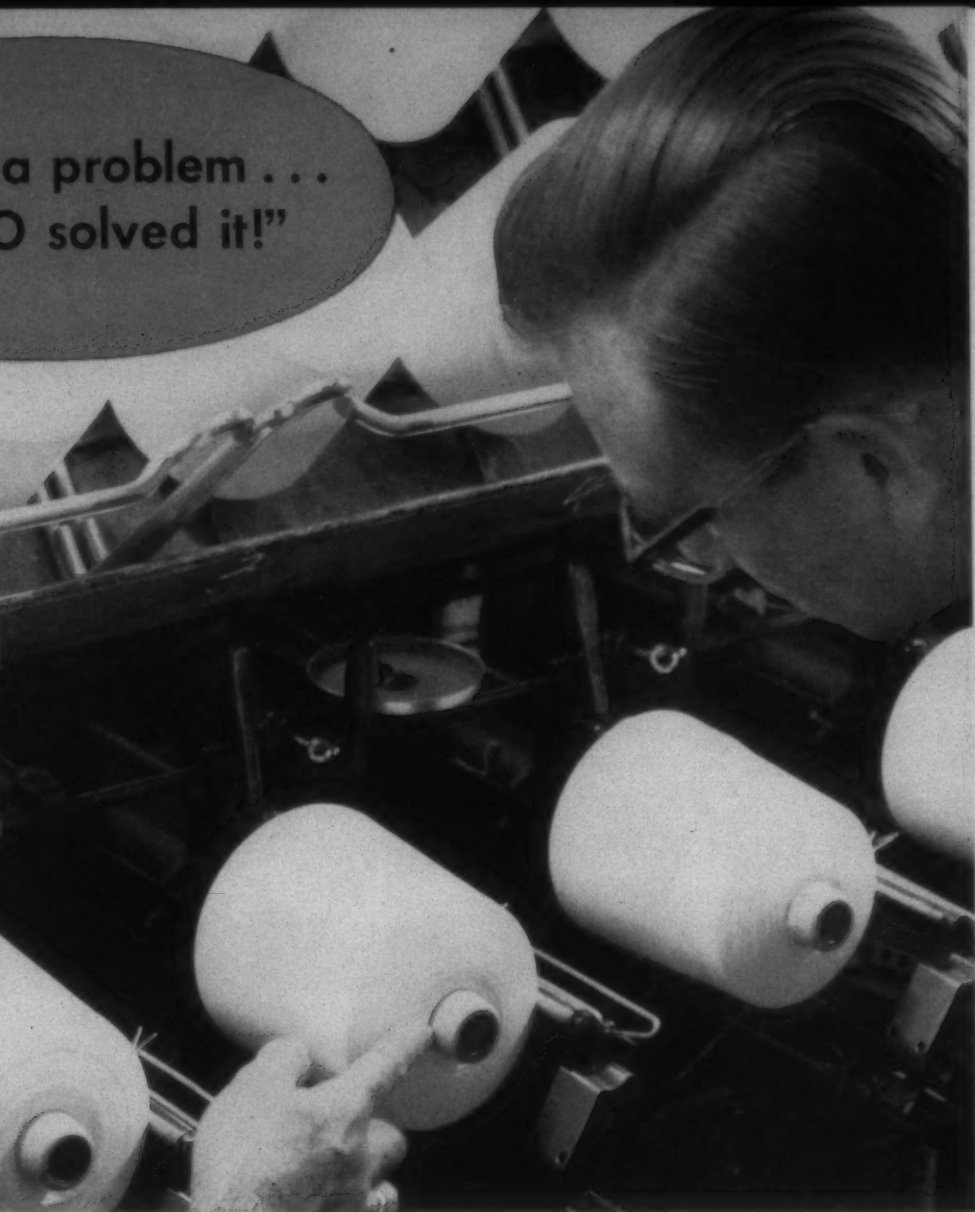


"We had a problem . . .
SONOCO solved it!"



THE NEED: New-type, lightweight shrinking cone for nylon.

The customer problem was three-fold: (1) the need for a 3°30' cone that would provide uniform shrinking of nylon yarn, (2) eliminate staining of yarn in the process, (3) and, the elimination of yarn slippage in primary winding upon delivery.

Sonoco engineers solved this problem by first developing an especially constructed, lightweight 3°30' cone that provided even, controlled shrinkage. Yarn staining was eliminated by the use of special Sonoco-manufactured white paper that was used as the stock for this cone.

Finally, Velvet bands were applied at the cone point and base to prevent wasteful yarn slippage. The result: customer satisfied.

Only Sonoco, with its modern laboratory, engineering and production facilities, could solve this problem economically and efficiently. It is typical of countless cases where Sonoco leadership in the progressive development of textile paper carriers, based on 60 years of experience, has benefited the industry. Let Sonoco help you!

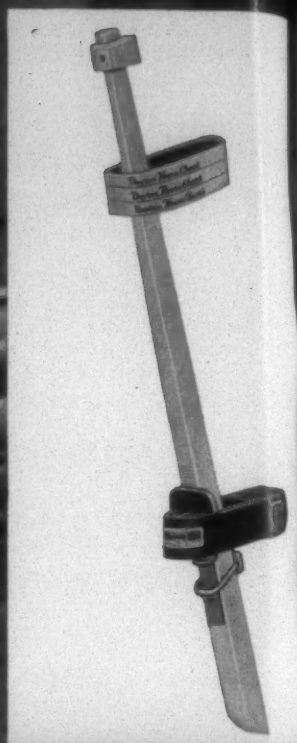
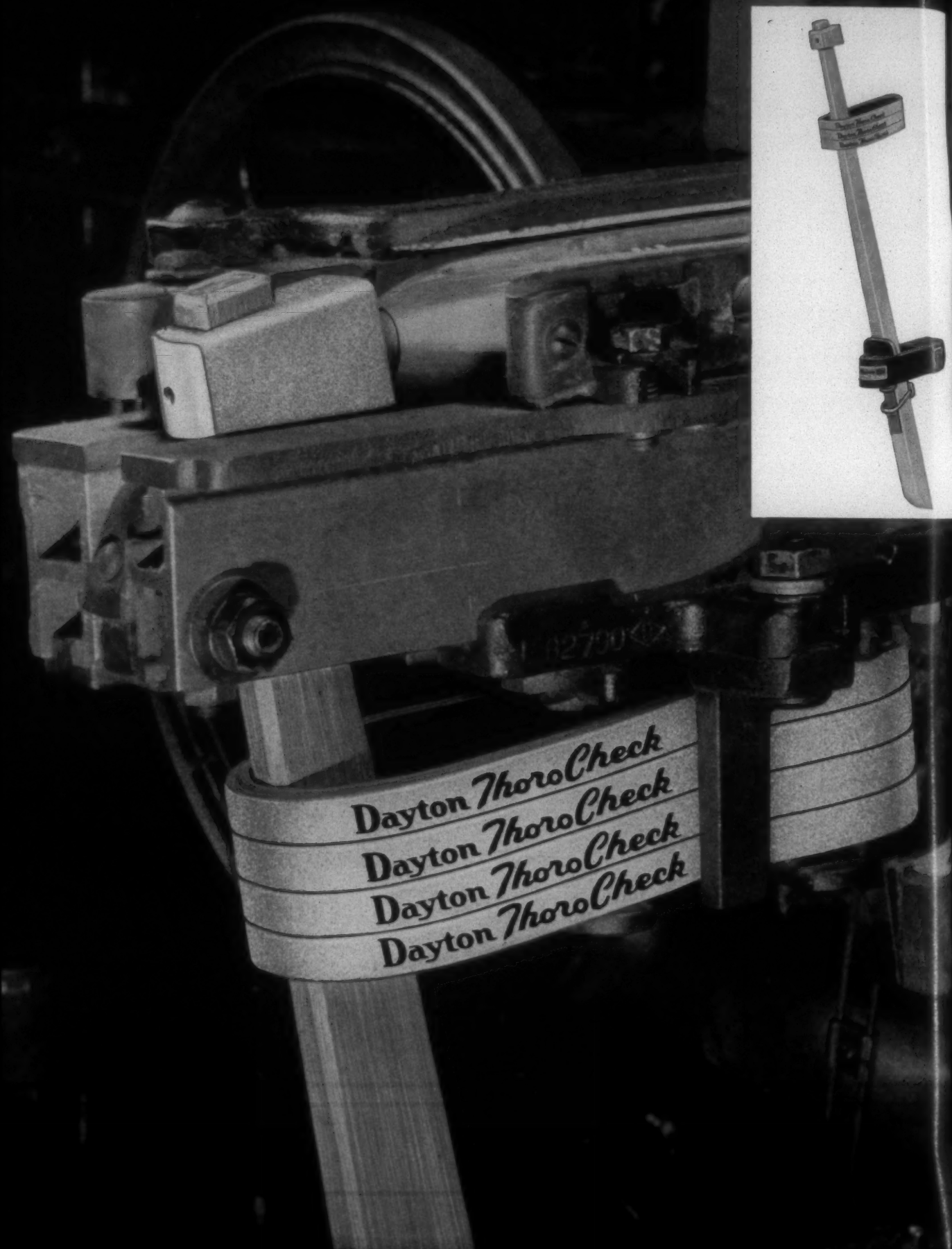


SONOCO

Products for Textiles

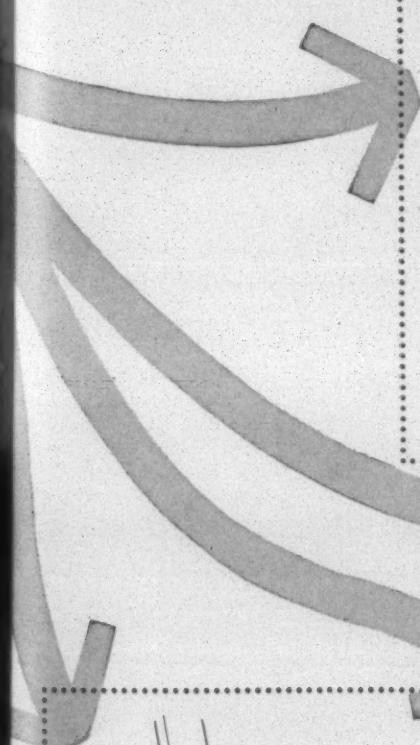
SONOCO PRODUCTS COMPANY

Main Office—Hartsville, S. C. • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Cal. • Atlanta, Ga. • Granby, Quebec • Brantford, Ontario • Mexico, D. F.

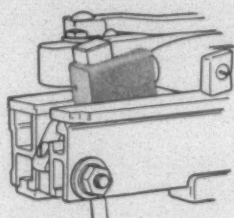


Protect Your Looms

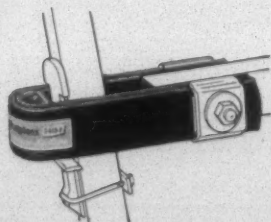
From Shock and Wear with the Dayton Combination



WHY TAKE CHANCES with your looms when you can protect the picking assembly at every point of shock and wear with Dayton Thorobred Loop Pickers, ThoroCheck Straps and Deluxe Lug Straps? Designed to work together as smooth running combination, they absorb the shock of high speed shuttles, smoothly check the picker stick, and accurately deliver the shuttle return. Lasting 2 or 3 times longer than similar products, the Dayton Picking Combination reduces both the cost of replacing parts and the downtime it takes to make repair.

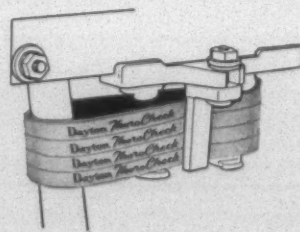


DAYTON THOROBRED LOOP PICKERS are scientifically designed to avoid wear. Examine them point for point... the tilt of the picker face is just right for perfect, strain-free shuttle contact... the tapered picker stick hole and tapered bottom insure accurate seating and protect against tearing the loop ply... and the smooth, round corners prevent jerked-in fillings. It all adds up to millions more wear-free contacts.



DAYTON THOROBRED DELUXE LUG STRAPS are molded together around a built-in plug that absorbs the terrific shock generated during picker stick thrusts. This one-piece, link-free construction means longer service and greater protection for the stick and loom.

DAYTON ENDLESS THORO-CHECK STRAPS have a superior checking action and a stronger multi-ply construction that add 6-8 months more of trouble-free service. Because of their smooth, graduated checking action, Dayton ThoroCheck Straps never drag over the stick, never interfere with the shuttle throw.



Check the results yourself by refitting some of your looms with the complete Dayton combination and comparing its long life, freedom from downtime, and smoother picking action. Just ask your Dayton representative next time he calls or write The Dayton Rubber Company, Textile Div., 401 S. C. National Bank Building, Greenville, S. C.

Dayton Rubber

Dayco And Thorobred Textile Products For Better Spinning and Weaving



TEN-O-FILM starches and synthetics go hand in hand

Looking for a starch that's compatible with the adjuncts you use in warp sizing synthetics? Ten-O-Film is your answer. This chemically modified starch derivative was specially developed to simplify and improve processing of both the new synthetic and natural fibers.

Ten-O-Film brings new economies to sizing operations. It requires less boiling time than conventional starches: Ten-O-Film reaches stable viscosity in 30 minutes and remains stable even under prolonged heating and circulation. Desizing can be carried out more readily, hence more economical dyestuffs can be used and with greatly reduced bleeding. The clarity of Ten-O-Film sizes will not mask the bright or pastel shades so widely used in modern fabrics. In desizing, the soap boil-off may sometimes replace the enzyme desizing process.

These are only a few of the advantages of using Ten-O-Film starches. Our technical representative will give you the complete Ten-O-Film story. He has tried and tested formulations for all popular synthetic and natural fiber blends.

The technical facilities of the world's largest corn processors await your call. These facilities include laboratories devoted to continuing research in textile technology, as well as unmatched sources of firsthand textile knowledge and experience. Our technical representative will be glad to help you take advantage of these resources. For full information, call our nearest sales office or write direct.

TEN-O-FILM[®] starches

*Fine products for the Textile Industry: CLARO[®] • GLOBE[®]
EAGLE[®] • FOXHEAD[®] • TEN-O-FILM[®] starches • GLOBE[®] dextrines*



CORN PRODUCTS SALES COMPANY • 17 Battery Place, New York 4, N. Y.

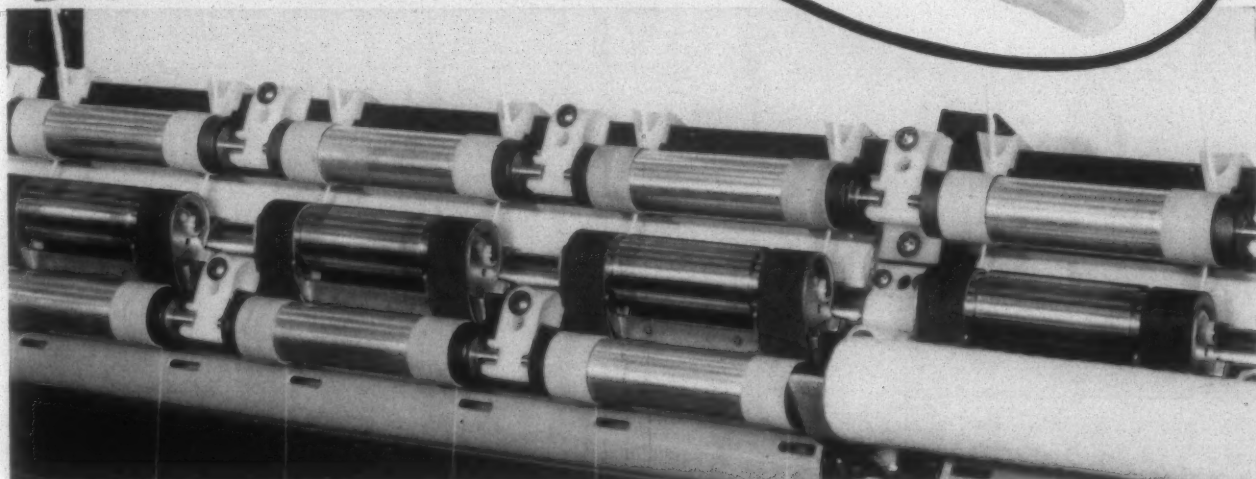
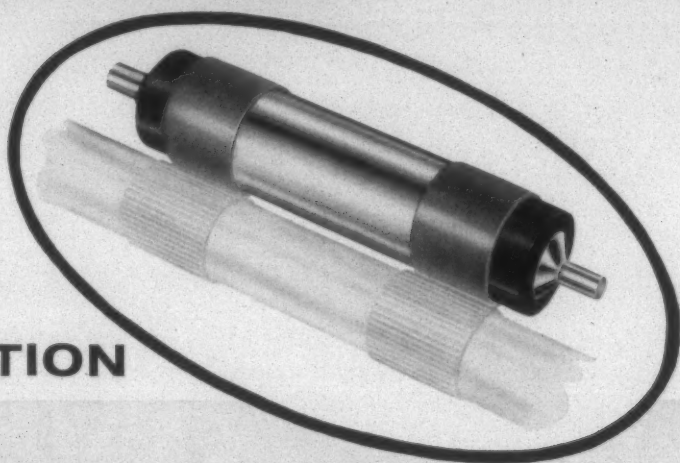
new MagneTrol

pressure system for drafting

by **SACO-LOWELL**

**NO CAP BARS
NO SADDLES
NO STIRRUPS
NO LEVERS
NO SPRINGS
NO WEIGHTS**

Plus **NO LUBRICATION**



The MagneTrol Pressure System by Saco-Lowell uses the force of magnetic attraction to produce required pressures — does away with all auxiliary equipment. Most important of all, the MAGNETROL System requires NO LUBRICATION above the roller beam.

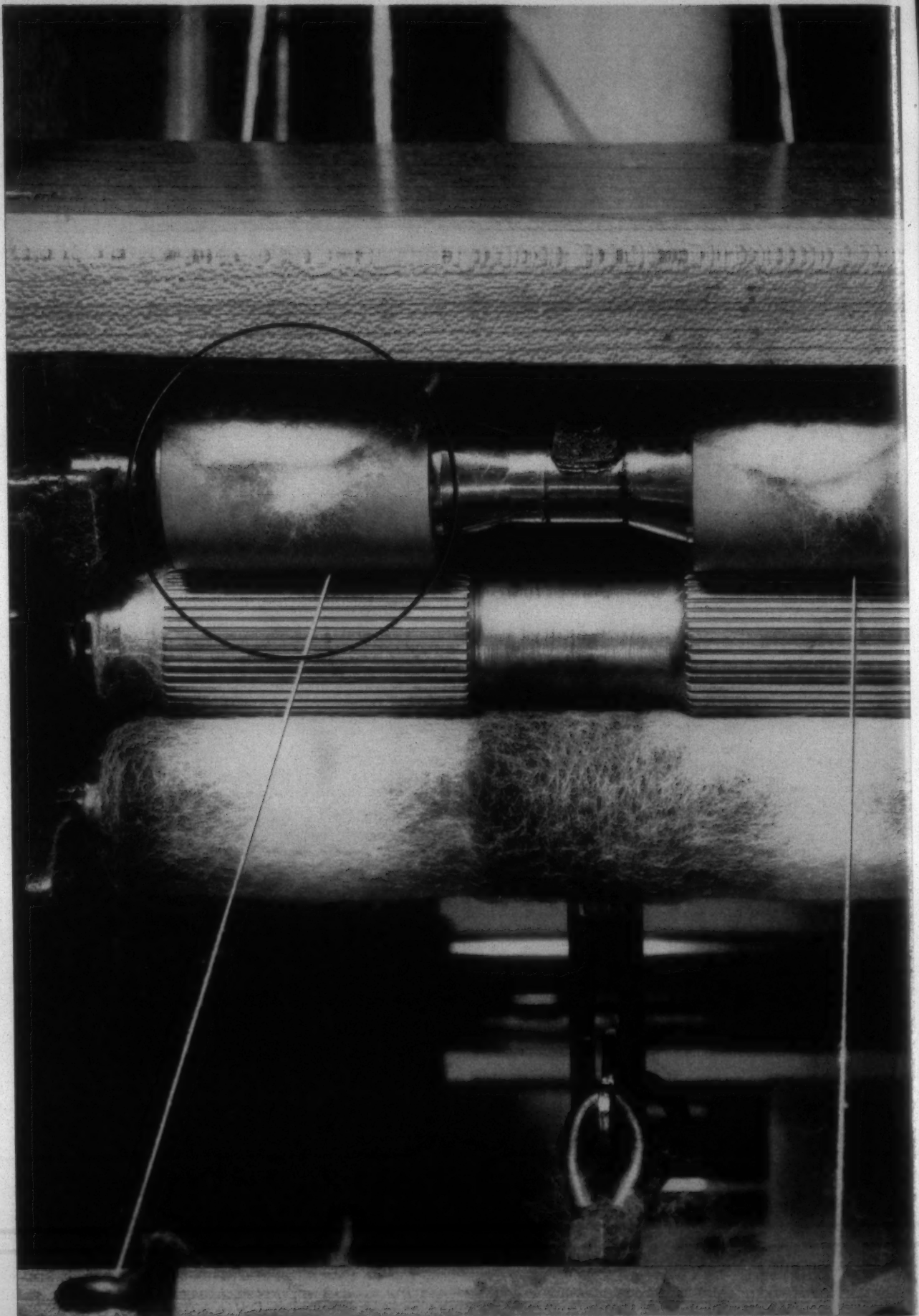
- NO LUBRICATION ABOVE THE BEAM
 - EXCEEDINGLY FEW COMPONENT PARTS
 - EFFICIENT CLEANING ACTION OF THE CLEARERS
 - ELIMINATION OF PROBLEM OF WORN NECKS ON STEEL ROLLS
- MAKES ANY DRAFTING ELEMENT WITH MAGNETROL THE CLEANEST MOST EFFICIENT EVER DEVELOPED**



SACO-LOWELL TEXTILE MACHINERY DIVISION
SACO-LOWELL SHOPS

Executive & Sales Offices — EASLEY, S. C.

Branch Sales Offices — ATLANTA, GA., BOSTON, MASS., CHARLOTTE & GREENSBORO, N. C.



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eliminate eyebrowing

Accotex anti-static cots help prevent serious eyebrowing and reduce waste formation.

When you see eyebrows forming on your flat clearers, you can usually put most of the blame on the spinning roll. Hundreds of mills have virtually eliminated this problem by equipping their frames with NC-762 Accotex Cots.

NC-762 is one of the new anti-static roll covers developed by Armstrong textile research. This new cot has an exclusive "constant-friction" surface that has just the right amount of bite needed to pick up loose fibers—and pack them well back under the clearers. In addition, many mills report substantial reductions in the total amount of waste formed where NC-762 Accotex Cots are used.

As a result of this superior performance, NC-762 Cots provide maximum eyebrow resistance. They'll help you maintain high production of top-quality yarn by keeping to a minimum yarn irregularities caused by eyebrowing.

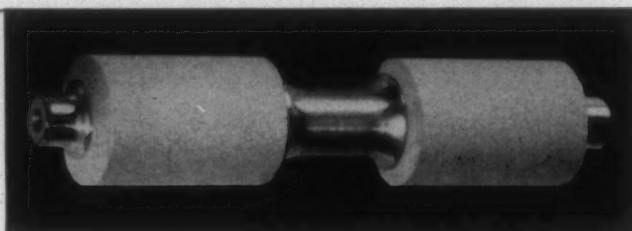
Like all Armstrong roll covers, NC-762 Accotex Cots are compounded to give long service life as well as excellent spinning performance. With just an occasional re-buffing (as seldom as once a year), these covers will turn out clean, uniform yarn shift after shift, for years.

In the card room, Armstrong NC-762 Accotex Covers give the drafting qualities and eyebrow resistance needed for drawing and roving frames equipped with flat clearers.

Whatever type of equipment you have in your mill, and no matter what fiber or blend you're spinning, there's an Accotex Roll Cover to meet your requirements. Your Armstrong representative will be glad to work with you in selecting the roll cover best suited to your work.

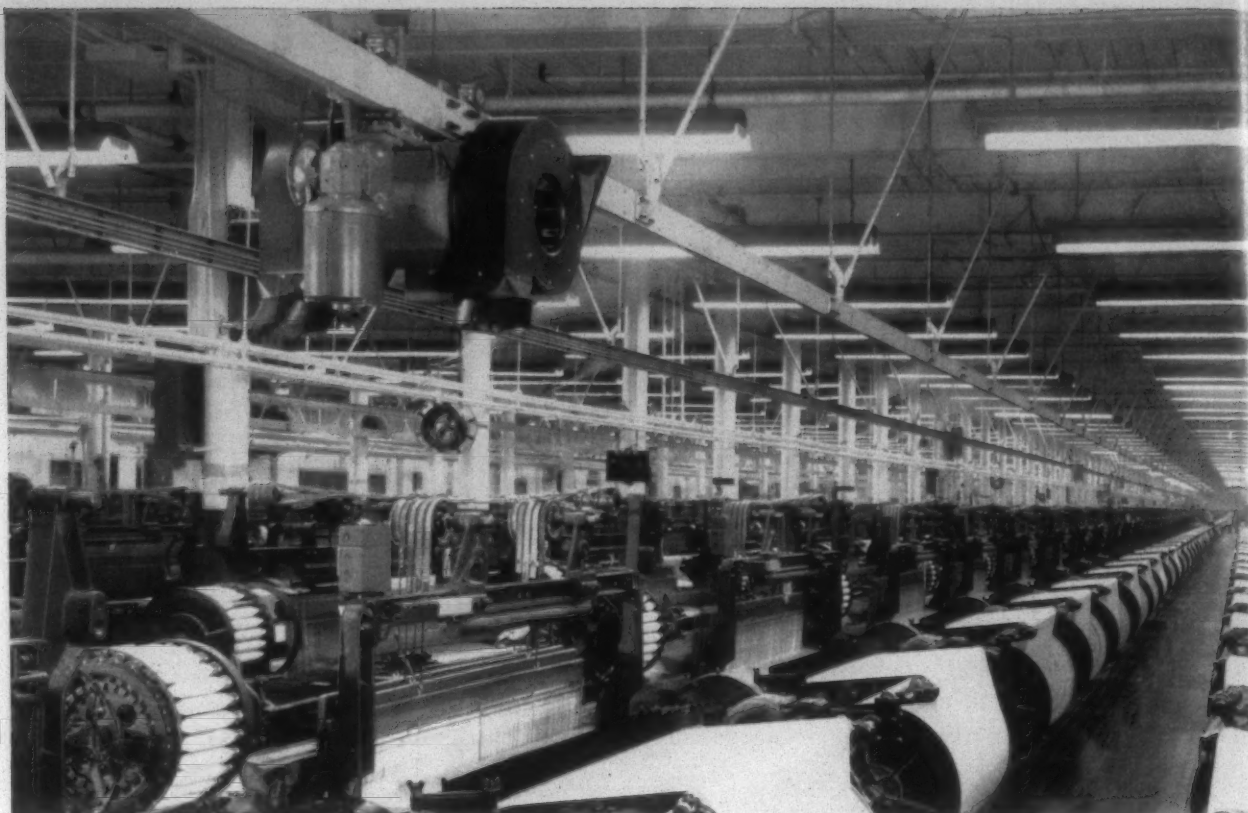
For more information on the complete Armstrong line of supplies for textile mills, write to Armstrong Cork Co., Industrial Division, 6512 Davis Avenue, Lancaster, Pa.

For maximum eyebrow resistance on spinning frames, you can depend on Armstrong NC-762 Accotex Cots. Ask your Armstrong man to arrange a test installation in your mill. Prove on your own frames how these cots perform.



Armstrong ACCOTEX COTS

... used wherever performance counts



AUTOMATIC CLEANING where overhead track brings full air sweep of loom cleaner to every loom on the floor, without disrupting loom operation, keeping looms free of accumulated waste.

KEEPS LOOMS CLEAN . . . WITH NO DOWNTIME

In mills where Amco Heliclone Loom Cleaners have been installed, new high-quality production standards are being established.

The swiftly whirling outlet nozzles, driven by powerful air streams, direct high velocity jets of air in overlapping, circular paths resulting in a rapid series of sharp puffs over loom and warp surfaces. At the same time, supplementary air outlets clean overhead track and ceiling.

Automatic cleaning with Heliclones largely eliminates end runs and floats, waste bunches, end breakage, overshoots, broken picks, and oil spots caused by loose accumulated waste. Of course, it completely eliminates the old-fashioned method of manual cleaning, which is a constant source of accidents and cloth imperfections, and is so costly in terms of labor and downtime.

Amco Heliclone Loom Cleaners may be used for the automatic cleaning of practically *all* makes and types of looms. A unit similar to the Heliclone is also available for winder cleaning. Write American Moistening Company for further facts.



- Keeps looms and ceiling free of accumulated waste
- Cuts loom cleaning and costly downtime
- Improves production and quality of fabric
- Reduces fire hazard
- Improves weave room appearance
- Can be used with beam handling equipment

AMCO HELICLONE[®] LOOM CLEANER

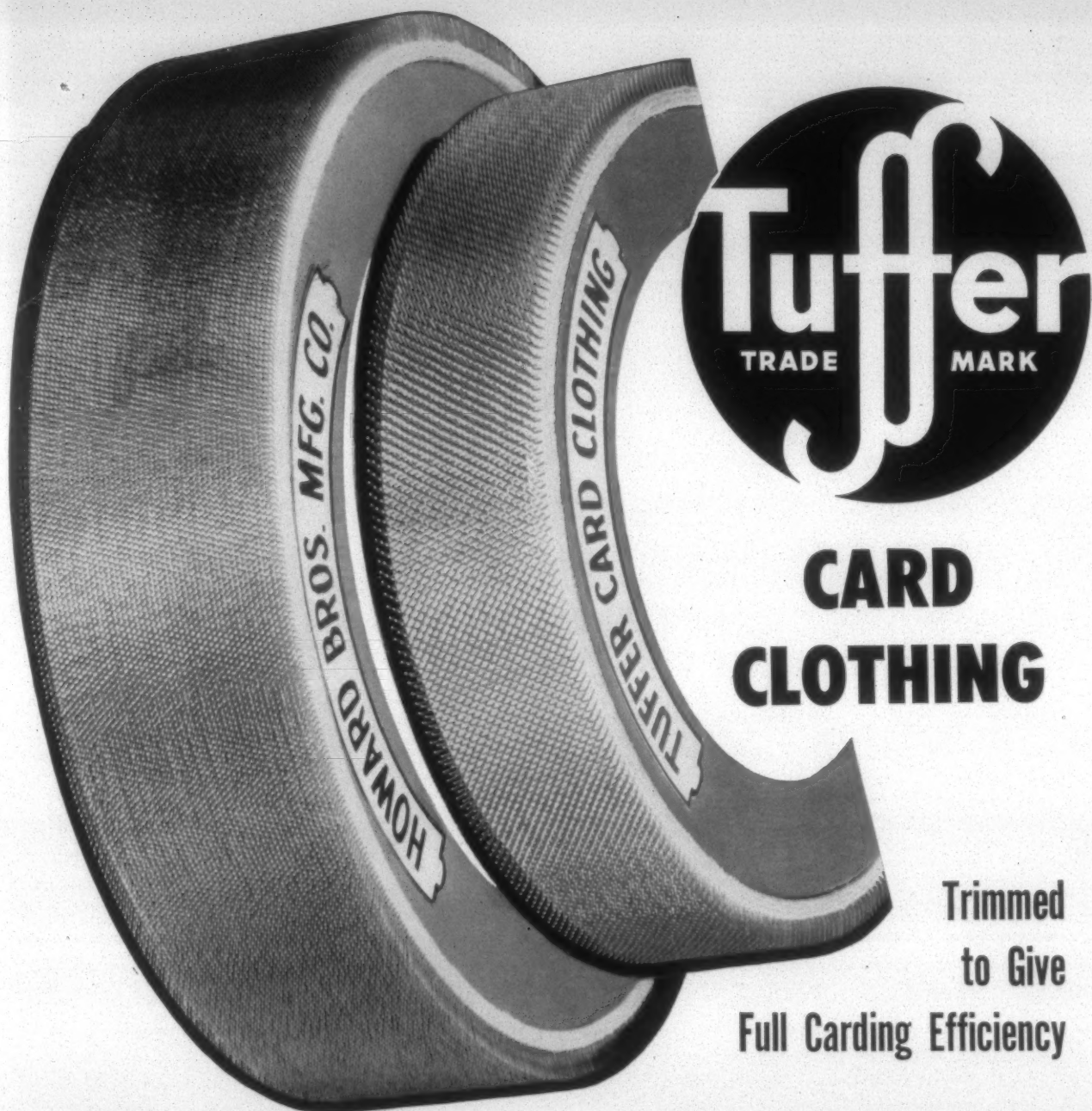
Pat. Pend.

AMERICAN MOISTENING COMPANY

Since 1888

Makers of Air Conditioning Systems and Textile Mill Equipment

Home Office and Plant: Cleveland, N. C. — Branches in Atlanta, Providence, Toronto



Trimmed
to Give
Full Carding Efficiency

The trimming operation in the manufacture of card clothing is a very important one. It must be RIGHT if top quality production is to be attained.

TUFFER Precision Trimming is one of the major reasons why TUFFER Card Clothing fits the cylinders so smoothly and does such a fine job.

The perfectly-trimmed sides of each TUFFER fillet fit

snugly and properly against each other, forming a single unit of clothing that has every point in position . . . and with all the wires having a complete uniformity of height, pitch and angle.

For years hundreds of mills have reordered TUFFER Card Clothing time after time. It fully meets the requirements of those who want the best.

B-4

Manufacturers of Card Clothing since 1866



HOWARD BROS.

WORCESTER 8, MASSACHUSETTS

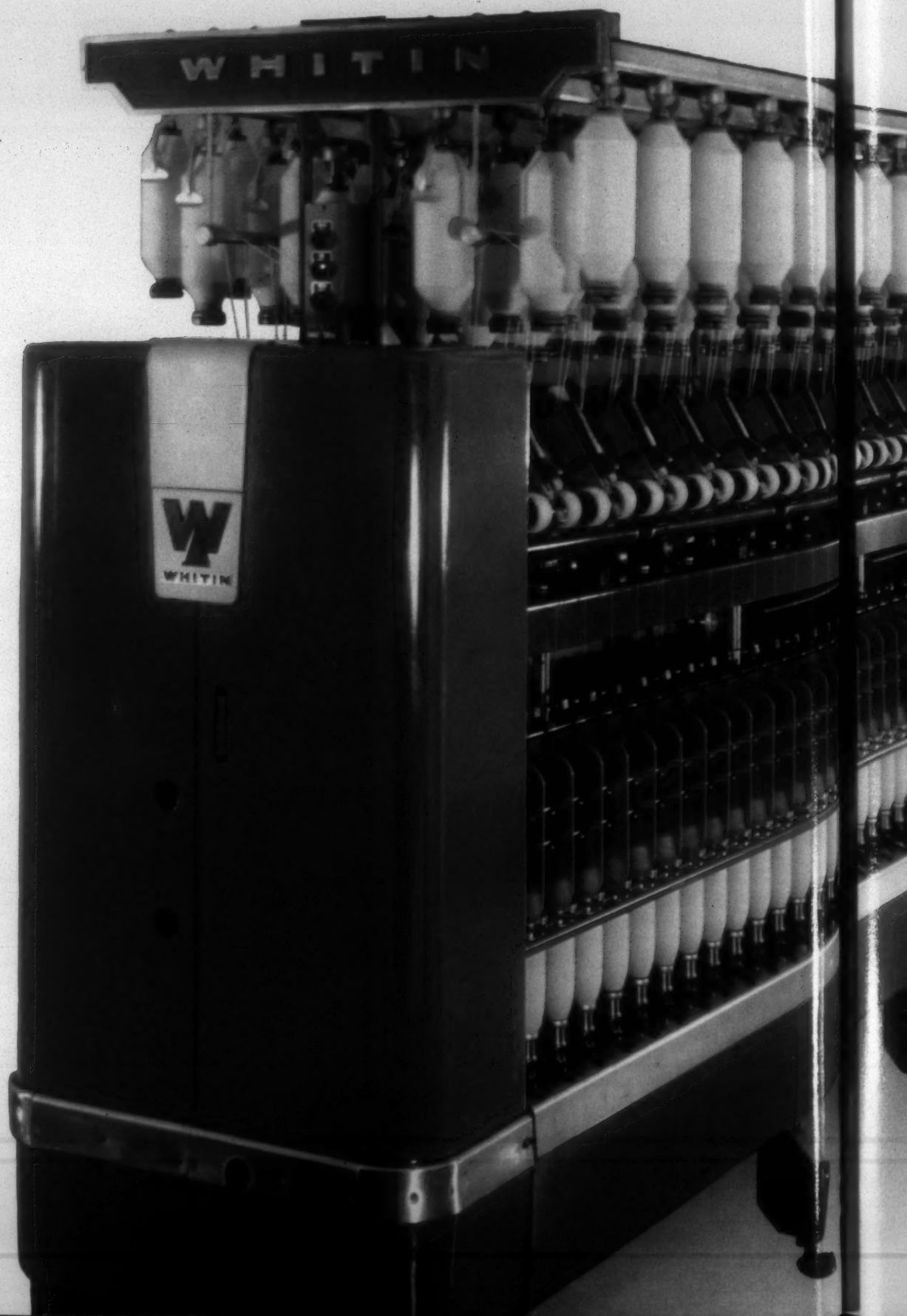
Southern Plants: Atlanta, Ga., Gastonia, N. C., Greenville, S. C.

Direct Representation in Canada


TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plants • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

The World's Most Advanced S



Spinning Frame .. the **WHITIN PIEDMONT**



Whitin made this claim for the new
Whitin **PIEDMONT** Spinning frame—
even while it was in its development
stages and still under wraps.

During its first public showings at
the Southern Textile Exposition in
Greenville, S. C. and at the
International Textile Machinery
Exhibition in Manchester, England,
thousands of textile experts and mill
men from all over the world were quick
to agree with the validity of our claims.

Their complete and enthusiastic
endorsement of the **PIEDMONT** exceeded
our most optimistic expectations.

A score of new and exciting features created
the indelible impression of smart design,
advanced engineering and outstanding performance.

FEATURES OF THE NEW **PIEDMONT SPINNING FRAME**

- ★ HIGHER PRODUCTION SPEEDS ★ SCIENTIFIC BALLOON CONTROL RINGS
- ★ SINGLE SPINDLE DRIVE WHICH ELIMINATES CYLINDER, TAPES AND TAPE TENSION PULLEYS
- ★ MODERN HEAD END ENCLOSING NEW GEARING AND IMPROVED BUILDER
- ★ BUILT-IN WASTE REMOVAL AND MOTOR HEAT DISSIPATION
- ★ SIMPLIFIED CLEANING ★ PRECISION CONSTRUCTION ★ MODERN STYLING

WHITIN MACHINE WORKS WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

For The Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Integral Gearmotors

Allis-Chalmers has announced the addition of a new line of integral gearmotors in both the concentric shaft and right angle types for integral horsepower motors through 100 h.p. Also announced for the first time is a line of fractional horsepower integral type right angle gearmotors.

The new integral units are available with either open or totally enclosed motors, double and triple reduction in standard ratios. A one-piece, corrosion resistant cast iron housing and rabbit-fit motor flange in the integral gear motors assure positive alignment of the motor and gears regardless of mounting position. Ratio changes are simplified through use of only one low-speed gear set for each drive size. The gear system has a minimum of moving parts to provide a compact, quiet operating unit.

The unit's hardened gears are said to contribute to long life, economical performance and make possible space saving construction. Splash lubrication of all moving parts assures efficient, dependable operation throughout the entire speed range. Openings are limited to one input cover and two shaft openings to provide oil-tight design. Long-life seals keep oil in and dirt out.

(Request Item No. L-1)

New Twister

The Collins Bros. Sav-Yarn twister which was shown at the Southern Textile Exposition

is reported to have several new features. Its Airestop spindle action is designed to provide instant knock-off action on both spindle and feed roll whenever an end breaks or a run-out occurs. This action disconnects the whorl and permits it to run freely without any drag on the other spindles run by the tape. This feature, according to the manufacturer, Collins Bros. Machine Co., prevents drop fly, roller laps and slack twist. Complete elimination of waste and licking action on continuous filament yarns, especially at the producers level, is also claimed.

The Sav-Yarn has a new builder action—a worm type which eliminates cams, counter weights and connecting rods, and is said to permit accurate variation of the pick and provide smooth, positive rail action without bound or jumping at the end of the stroke.

Two new creels are also offered. The "over and under" creels allows the operator to reach bobbins either over or under the creel rails. The new FlexoArbor creel bracket is said to eliminate front creel rails entirely and to be completely self-contained. This consists of a laterally adjustable bracket which will accommodate any size package, a drop-in threading and tension device mounted on a lift arm which can be pushed out of the way when a bobbin is changed, and the greatly simplified Collins skewer spring arbor.

The Collins Sav-Yarn twister can operate with any number of ends in a given ply and with ring sizes from 2" to 8". It can be used on all singles and up to 14 ply, on

all types of yarn including glass and paper, and is especially effective for textured and bulk yarns. This machine is presently in production and a number are installed in mills. The features of this twister can be used as changeovers on any Collins ply twister or on any other make of tape-driven twister, Collins reports.

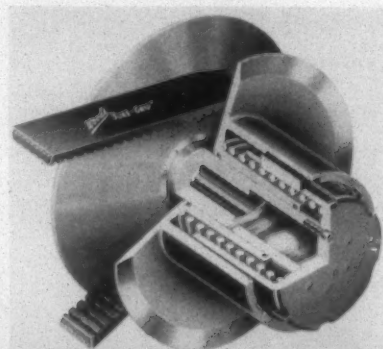
(Request Item No. L-2)

Odorless Aluminum Formate

Aceto Chemical Co. has made available a new odorless grade of aluminum formate powder. Aluminum formate is used for waterproofing textiles and also as a dye mordant. In addition to being odorless, the new grade has all the usual desirable properties that powdered aluminum formate offers. These advantages are: a very high active Al_2O_3 content; lower cost per active unit; and savings on freight, storage and handling when compared to solution forms of aluminum formate.

(Request Item No. L-3)

Variable Speed Sheave

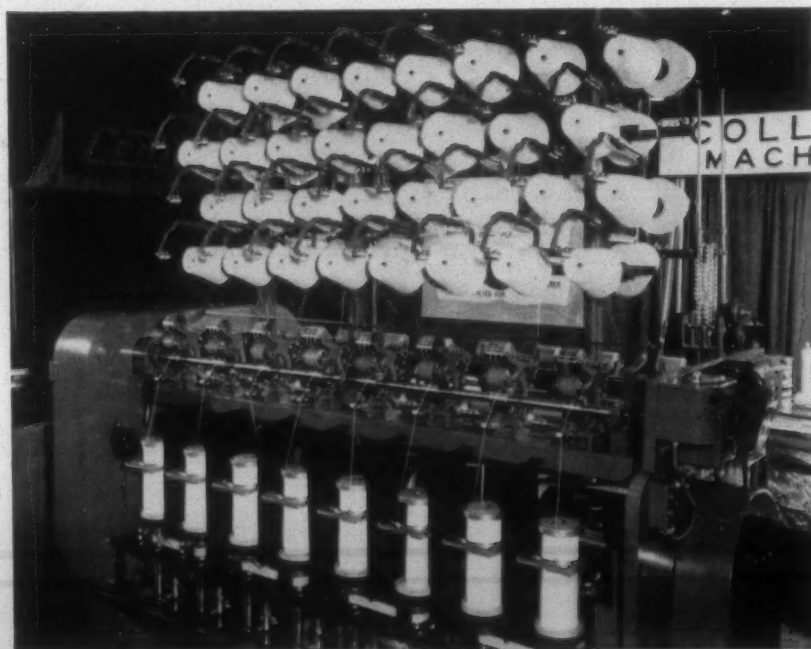


T. B. Wood's Sons Co. has incorporated a new design in its MS series variable-speed pulleys.

T. B. Wood's Sons' MS series variable-speed pulleys incorporate a new design that is said to eliminate corrosion as well as freezing and sticking. Bearing surfaces are re-oiled from an oil reservoir with each rotation of the pulley. The continuous rotational pumping action of the flange hub on the sleeve is said to renew and evenly distribute the oil film on the bearing surfaces.

There are no keys to obstruct the flow of oil around the surfaces between the flange hub and sleeve. A series of nylon-faced rubber keys, located outside the bearing surfaces, transmit the power from the stationary to the moving flange through a removable sleeve cap. The torsionally resilient keys are designed to carry the belt torque and assure even distribution of the load and equal transmission of power by both flanges.

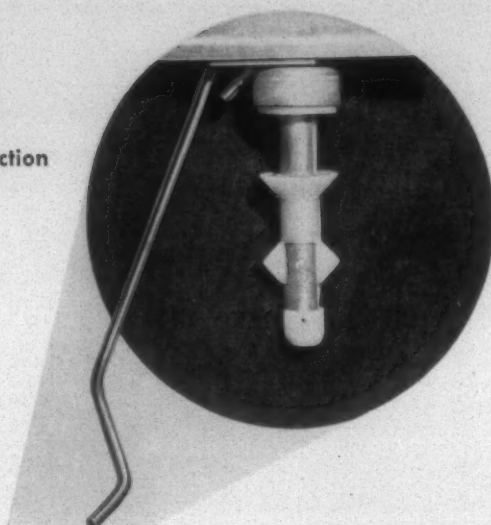
The use of oil as the lubricant is said to



Collins Bros. Machine Co. introduced several new features on its Sav-Yarn twister displayed at the Southern Textile Exposition.

Roberts Bobbin Holder

- Snaps off by hand for easy cleaning and inspection
- Retainer type ball bearing for uniform rotation
- Inside spring completely enclosed to keep lint out
- Automatic latching and bobbin release of simple sturdy construction
- Mounts easily on creel channel or on wood creel boards



A FEATURE OF

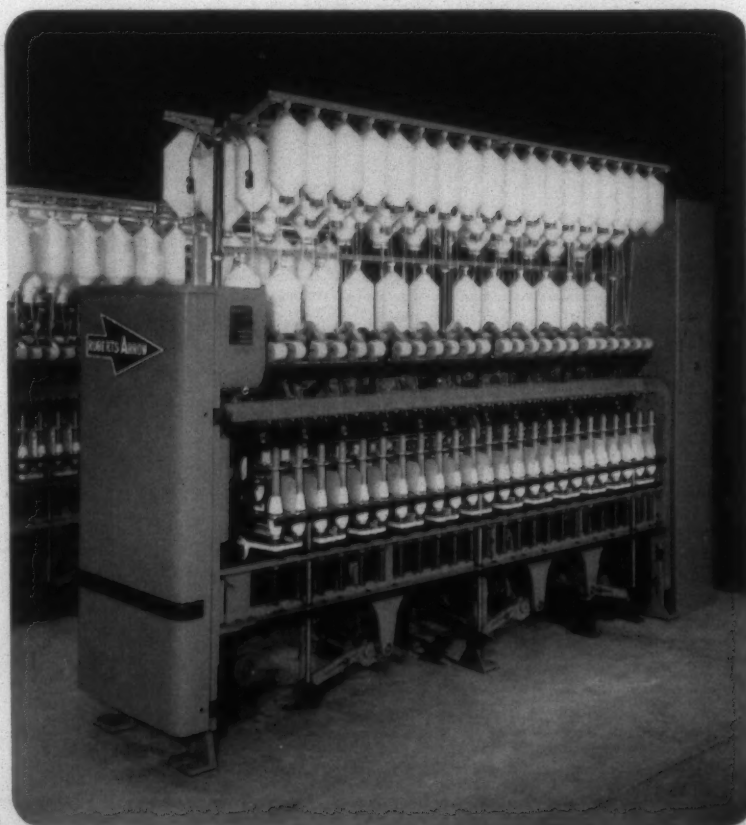


ALSO AVAILABLE AS
CHANGE-OVER MODERNIZATION
ON ANY MAKE OF FRAME

Very Advanced

ARROW SPINNING features:

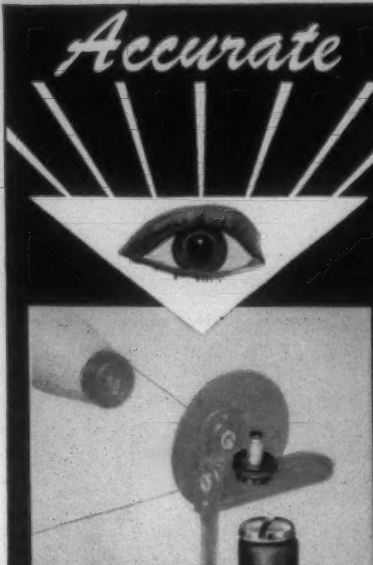
- PosiWate Top Roll Suspension
- UnaRing Balloon Control
- EvenGrip Fluted Bottom Rolls
- Roberts Supreme Ball Bearing Spindles
- Double-Apron High Draft System
- UnitVac Power-Suction Cleaning
- Roberts All-Ball-Bearing Head
- Unitized Sectional Frame
- AeroCreel with Latch-Type Bobbin Holders
- Flexibility For Cotton And Synthetics



ROBERTS COMPANY

SANFORD, NORTH CAROLINA

Accurate



Yarn is under perfect tension from a central location. One dial adjustment changes tension uniformly at all tension stations.

The Lindly Electrotense: Simple, compact, inexpensive. Accurately controls yarn tension from zero to about 20 grams.

DIAL CONTROL of YARN TENSION

at Any Number of Stations!

The Lindly ELECTROTENSE is the new, inexpensive, electro-mechanical way to control yarn tension from almost zero to about 20 grams. A turn of a single, centrally located dial applies desired tension evenly and simultaneously at all tension stations.

What are the advantages?

The Lindly ELECTROTENSE permits easy, instant change of yarn tension. It results in more uniform beams, more yarn per warp beam, less maintenance and machine down-time, fewer broken ends and better cloth.

GET THE FULL FACTS ON THIS NEW TIME-SAVING, QUALITY-IMPROVING, COST-CUTTING LINDLY SYSTEM. WRITE, WIRE OR PHONE TODAY!

It Pays to Know  the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

FOR THE TEXTILE INDUSTRY'S USE—

eliminate the possibility of sticking, which might result from grease drying and leaving a solid residuum. Under conditions of normal operation, the oil reservoir requires checking only twice a year. The lubricant is retained for long periods between refills by the O-ring oil seals.

Pulleys will run indefinitely at set speed without sticking. There is no down-time, no periodic running through the speed range. To obtain maximum speed of the driven machine, the handwheel on the adjustable motor base is turned to move the motor towards the driven machine. The belt will then run at maximum pitch diameter, around the maximum circumference of the variable-speed pulley.

Turning of the motor base handwheel in the opposite direction, to move the motor away from the driven machine, will slow the speed through a continuous range. In the minimum speed position, the belt runs at minimum pitch diameter, around the minimum circumference of the variable-speed pulley.

The new MS series consists of five pulleys: MS-77-2, MS-97-3, MS-97-5, MS-127-10 and MS-127-15. These are rated, respectively, 2, 3, 5, 10 and 15 h.p. The horsepower ratings are based at constant torque and for maximum speeds, that is at maximum pitch diameter. At other pitch diameters, horsepower capacities reduce in proportion to the driven speed.

(Request Item No. L-4)

Selvage Shearing Machine

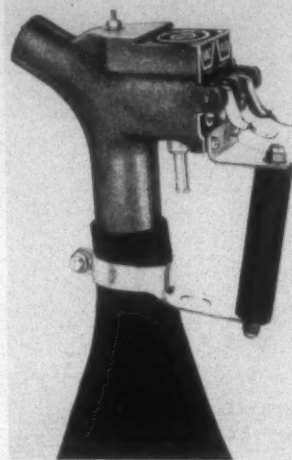
A selvage shearing machine, operating on a new principle and said to overcome previous shortcomings of the old hand shearing and circular vertical knife shearing systems, has been introduced by Robert Reiner. The unit, consisting of horizontally mounted fast rotating cylindrical knives and fixed blade together with loop openers, electric guiders, safety guard blower and suction, is said to provide high speed, safe, clean shearing.

The cloth first passes an automatically guided loop opener. A second guider controlling a metal binder plate keeps the body and narrow selvage of the cloth from coming into contact with the cylindrical knives and fixed blade. Only the loose selvage threads which are blown into the shear-

ing point are removed. Cloth with slack selvages, nubby weaves and profile fabrics can be now cleaned with absolute safety, Reiner reports. Waste removal is automatic. One or both selvages can be processed.

(Request Item No. L-5)

Industrial Cleaner



Scott & Williams has introduced this new blower-vacuum industrial cleaner.

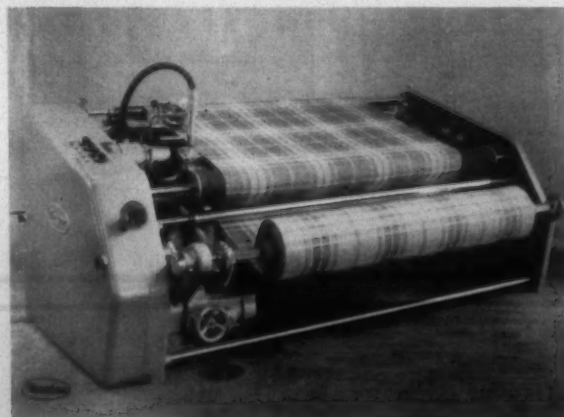
Scott & Williams has been named exclusive agent in the U. S. for the Air Vac industrial cleaner manufactured by C.M.I. Products Ltd. of London, England. The equipment is capable of blowing a controlled stream of air from its nozzle or creating a vacuum to draw in lint to an attached collecting bag.

It is equipped with two convenient levers, one marked "air" which when depressed will direct compressed air out through the nozzle, the other lever marked "vac" when depressed creates a vacuum in the nozzle so that lint may be sucked up and stored in an attached bag.

The cleaner has no moving parts so that only simple general maintenance is required. This means low cost upkeep and a machine always ready for use when needed. The lint collecting bag is made with an opening at the bottom so that by depressing the lever marked "vac" it may be quickly and easily emptied without removing the bag from the machine.

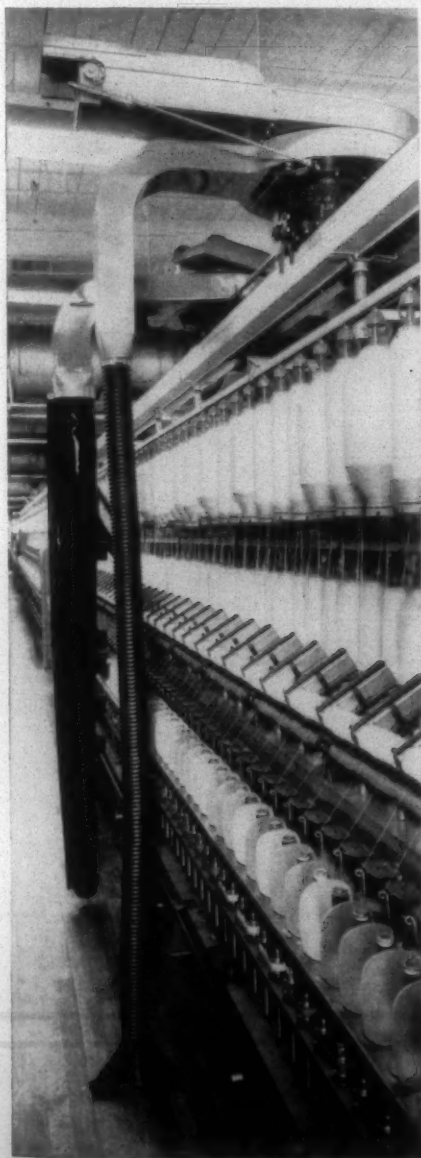
The machine operates from compressed

Said to operate on a new principle, this new shearing machine is being offered by Robert Reiner Inc.



*Picks lint up
and takes it away!*

TRAVELING VACUUM CLEANER

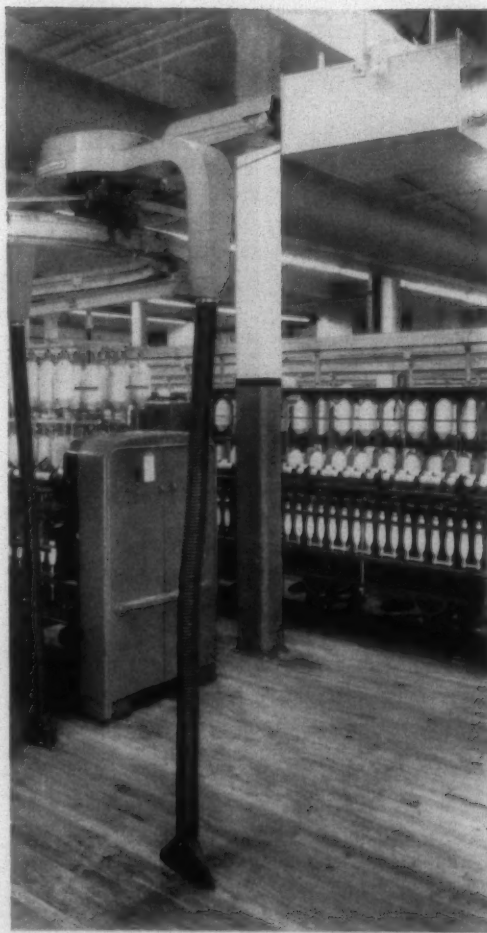


Travels with Frame Cleaner introducing floor level suction adjacent to underframe flexible sleeves.

Frame Cleaner puts lint into spinner's alley. Vacuum Cleaner removes it.

Once a trip, collected lint discharged into vacuum receptacle . . .

The most important step forward in the cleaning art since the introduction of extended flexible sleeves.



Parks-Cramer Company

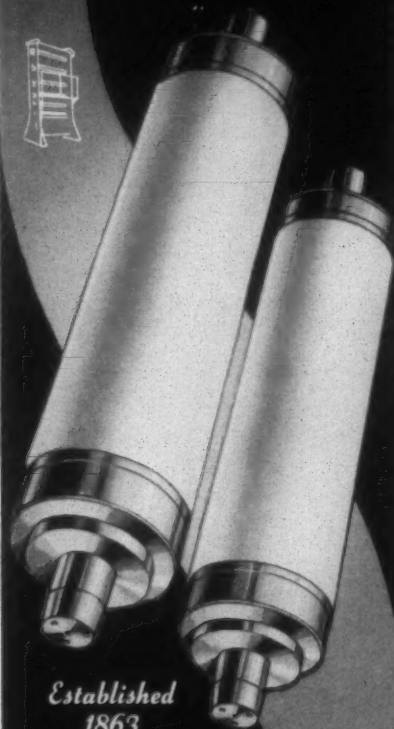
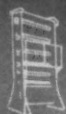
FITCHBURG, MASS.

CHARLOTTE, N. C.

ATLANTA, GA.

411

"HOLYOKE" CALENDER ROLLS



Established
1863

For nearly a century "HOLYOKE" Rolls have been world renowned for sturdy, rugged construction, designed to give dependable, long life.

We are equipped to give service on new and refilled rolls with various types of fillings and densities. Also stainless steel, steel, brass and special purpose rolls.

Our engineers will gladly call to give you the benefit of their long experience making rolls for processing textiles and paper.

Correspondence Invited

**HOLYOKE MACHINE
COMPANY**

CALENDER and EMBOSING ROLLS
for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

FOR THE TEXTILE INDUSTRY'S USE—

air. A quick action coupling is supplied with each cleaner so that it may be attached to the end of air hoses located in rooms where lint or fly is a problem. The Air Vac may be attached to these same hoses and the operator has not only a nozzle to blow lint with but one to suck it up and store it in a bag. (Request Item No. L-6)

Fiber Fineness Tester

Motion Control Inc. has announced the development of the Fibronaire, said to be a completely integrated instrument to test the fineness of bulk staple cotton fibers with maximum accuracy, dependability, speed and ease by the "porous plug" or "air-flow" method. Except for manual loading of the weighed sub-sample, the Fibronaire is said to be completely automated. The manufacturer states that the unit has been shown to operate at rates upwards of 2,000 samples per day for several weeks at a time with no significant drift in calibration and that the correlation with micronaire values on U.S.D.A. check cotton has been found to be excellent.

The Fibronaire is only 7½" wide, 9" deep and 19" tall over-all and weighs less than 18 lbs. It is self-contained with an automatic self-emptying moisture separator and all necessary pressure regulators so that it may be simply connected to any compressed air supply with 75 to 150 p.s.i. and a capacity of 0.8 c.m.f. or more. With the aid of a conveyor feed system especially designed by Motion Control, operating rates as high as 430 samples per hour have been achieved with only one Fibronaire and one weighing scale.

(Request Item No. L-7)

Formaldehyde Buffer

The Easton R. S. Corp. has announced the development and production of a completely new chemical resin formaldehyde buffer named RFB-X353, designed and formulated to protect cyclic, ethylene or methylated urea-formaldehyde resins as well as melamine-formaldehyde resin systems. It is said to be a definite advance in the protection of a resin finish against "resin decay" or hydrolytic decomposition as evidenced by formaldehyde fume and/or amine odor generation, often encountered when washed or unwashed resinated goods are subjected to severe temperature and humidity changes.

A descriptive bulletin entitled "A Resin Additive to Control Formaldehyde and Amine Fume Liberation" (TB#2A280) is available from Easton R. S.

(Request Item No. L-8)

Variable Speed Sheaves

Speed Selector Inc. has introduced a new line of wide-belt smooth-faced variable speed sheaves which operate on fixed centers employing 1½" wide V-belts. A combination of two of these sheaves and a hand control constitute a practical, low

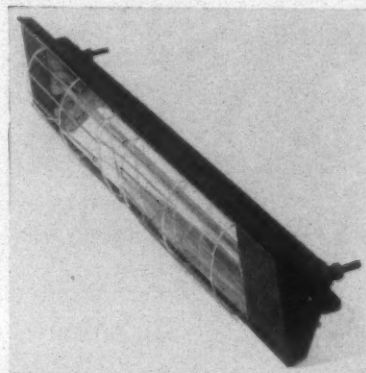
cost, variable speed drive, the company reports.

The controllable sheave is mounted on the motor and the spring actuated sheave is mounted on the shaft of the machine to be driven. These new smooth-faced sheaves incorporate some of the salient features of other speed selector sheaves, such as factory lubricated sintered bronze bushings, automatic belt alignment and wide ratio.

The drives are available in capacities of 1 to 3 h.p. with speed change ratios as high as 8 to 1. Employing a 1,750 r.p.m. motor, a speed range of from about 400 to 3,200 r.p.m. can be obtained at the driven shaft.

(Request Item No. L-9)

Radiant Heaters



Vulcan Electric Co. has introduced a new line of radiant heaters designed to provide uniform, intense radiation for comfort heating and many drying applications. They keep workers warm in out-of-the-way places and drafty areas indoors and on loading docks and other outdoor operations. They are ideal for such applications as textile printing, Vulcan reports.

Infrared heat source is a tubular heater mounted in a rugged metal frame with a highly polished bright reflector. Sliding steel clamps can be positioned anywhere along the heater length. They are mounted through holes drilled in angle irons or other supports.

Units are rated from 600 to 1800 watts in a wide range of over-all lengths from 24¾" up to 46¾". They may be furnished with wire guards at slight extra cost. A technical data sheet is available.

(Request Item No. L-10)

Ciba Navy Vat Dye

The addition of a new all-purpose navy blue color to the Cibanone Microfined vat dye series has been announced by Ciba Co. The new dye, Cibanone Navy Blue 2B Dbl. Paste, is described as offering level navy shades on cotton and rayon with improved chlorine fastness and minimum water spotting. Application flexibility of the dye and its reportedly excellent color value permit dyeing economical navies of vat-dyed fastness by pad-steam continuous dyeing and other vat dyeing methods.

Cibanone Navy Blue 2B Dbl. Paste dyes a slightly greenish navy shade in light to heavy depths by reduced or pigment meth-

Jacques Wolf Textile Printing Chemicals

MEASURE UP TO EVERY NEED



Jacques Wolf & Co. measures up to your printing needs again and again. For any step—in any spot—Jacques Wolf has a complete line of chemical auxiliaries, designed specifically for better performance. Here's a variety of up-to-date products and services that can positively be adapted to your operation—to improve your techniques, giving you brighter prints, sharper outlines. For information and samples, contact Jacques Wolf & Co. today.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

PRINTING

SUPERCLEAR*—All viscosities. Used for machine and screen printing of all types of textile fabrics. Produces bright prints with sharp outlines and very fine detail. Also used extensively to prevent migration of colors in dyeing.

SUPER GUM H—Full flow for roller and screen printing application. High color value, easy to handle. Compatible with all colors. Effective with acid or alkaline medium.

GUM TRAGACANTH SOLUTION—Made by a patented process. Used with Acid, Direct or Insoluble Azo Dye stuffs for screen printing, this gum gives exceptionally clear, sharp prints.

SCREEN GUM W-1141-B—Used as a thickener for Rapidogen and Indigosol type dye stuffs. Good color value; excellent mark and washes easily.

VAT GUM 80 XX—For application and discharge printing of vat colors. Has necessary balance of sulphonylates, carbonates and hygroscopic agents plus converted thickeners to assure high color value.

DISCHARGING

HYDROSULPHITE AWC—Used for application of vat colors and for discharge printing on all textiles. It may also be employed for stripping wools, acetates and other fabrics.

HYDROZIN—Used for discharge printing on acetate grounds. Also used for stripping colors on wool and hosiery (nylon, etc.). As a catalyst for polymerization of Vinyl monomers.

MORDANTS

ACETATE OF CHROME, ALUMINUM ACETATE, ALUMINUM FORMATE

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JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.



FOR THE TEXTILE INDUSTRY'S USE—

ods. Suitable for use with all types of vat dyeing equipment, the dye can be applied to yarns or piece goods with equal readiness. Its shade properties are said to permit adjustment for production of the full range of commercial navies. With characteristic vat dye fastness, especially very good light fastness, Navy Blue 2B is reported to be an ideal companion dye to reddish vat navies for better shade matching.

(Request Item No. L-11)

Variable Speed Spinning Frame

On the woolen system, variable speed ring spinning is now a practical, economical method of spinning for yarn mills, according to Davis & Furber Machine Co. The firm's literature lists and describes the following advantages for the company's new variable speed spinning frame:

- (1) Substantial increase in production with the same floor space and labor requirements.
- (2) Greater front roll speeds.
- (3) Greater control of yarn tension evenness.
- (4) Minimum ends down.
- (5) Firmer packages of yarn.
- (6) More yards delivered per doff.
- (7) Speed adjustments can be made on control dials without stopping frame.

A variable-speed motor drive with eddy current clutch and electronic controls has



With the introduction of this spinning frame by the Davis & Furber Machine Co., variable speed ring spinning on the woolen system is now said to be both practical and economical.

been designed into the Davis & Furber frame head-end mechanism. In addition to the new equipment needed to tie the electronic controls to its operation, this motor drive includes control dials and a tachometer which reads directly in front roll r.p.m.

The new Model F frames can be ordered

to include all of this equipment or existing constant-speed Model F's now in operation can be converted to variable speed operation.

Setting speeds for a new run involves using the proper set of production change gears to fix the maximum front roll speed with the adjustment of three control knobs (a) maximum operating speed; (b) minimum operating speed; (c) acceleration rate from stand still to operating speed. Further adjustment of maximum and minimum speeds can be made without stopping frame. Constant speed frame operation is included in adjustment range, for comparison or any other reason.

The curve that indicates changes in front roll speed during bobbin winding cycle set-up is controlled by a mechanical tie-in of the electronic equipment to the builder cam shaft. As the yarn winds on bobbin from barrel diameter to outside diameter and back again, the changing angle of pull and its changing effect on yarn tension is compensated by changes in front roll speed.

Comparative production figures (variable speed versus constant speed) on Davis & Furber frames, have been compiled and published. Selected mills furnished constant speed frame figures. For accurate comparisons, matching test figures on the variable speed frame were obtained, in each example, by duplicating mill conditions—using the same frame specifications with the same identical roping. The same spinning rings, travelers, bobbins or paper tubes were used. Each run was long enough to establish a pattern of continuous performance.

(Request Item No. L-12)

a Perfect Pair

"WHERE Good Connections COUNT"

Here is the combination which is delivering the ultimate in economy and accurate control of steam flow to cylinders on slashers, dry cans, embossers, calenders, etc. Outlasts all others.

The Rotary Union*—The self-aligning and self-adjusting ball bearing mechanical sealing unit that provides a positive rotating seal.

Unitrap*—The only steam trap that automatically delivers peak efficiency at all pressures from 0 to 250 lbs. Warms up fast—saves steam.

Contact our nearest office for full information on this incomparable combination.

PERFECTING SERVICE CO.
(Home Office and Factory)
332 Atanda Ave. Charlotte, N. C.

*Patented—Trade Name

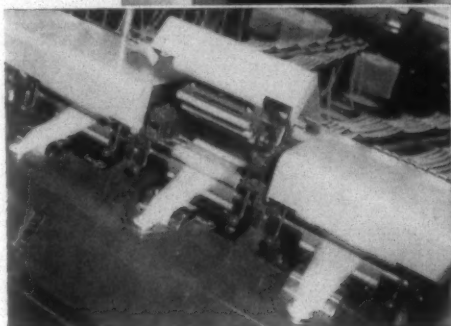
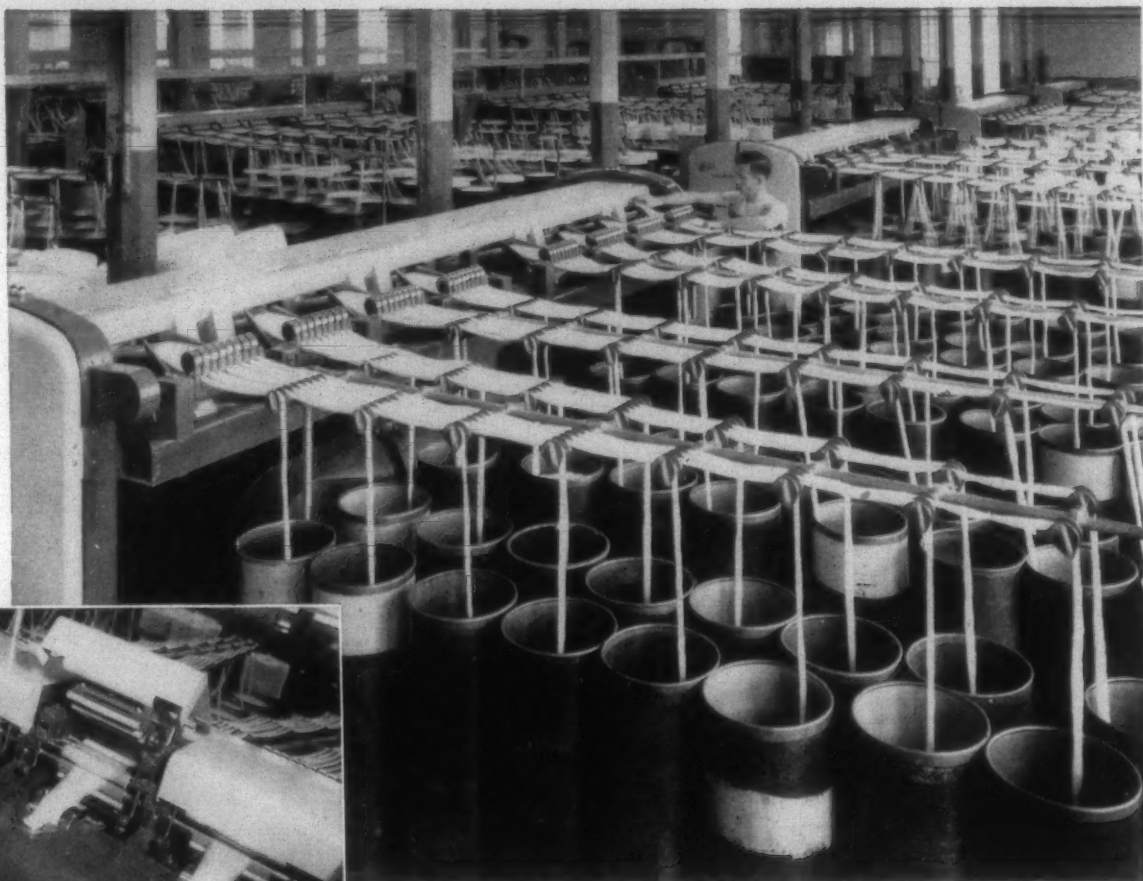
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Sandoz Navy Vat Dye

A free flowing anthraquinone vat paste manufactured primarily for the production of navy shades has been introduced by Sandoz Inc. The dye is said to build well and provide good money value. It exhibits a

WHITIN EVEN-DRAFT* DRAWING

*the first, and only, practical
High-Speed Drawing Frame*



An 80 delivery installation of Whitin EVEN-DRAFT drawing frames, showing (at left) unique Pneuma-Clear cleaning units.

Enthusiastic statements from scores of mills conclusively prove that Whitin EVEN-DRAFT drawing frames consistently outperform all others — positive evidence that they can truthfully be called the first practical, and successful, high-speed drawing frames. Users report up to triple production, sliver more even than ever before produced, costs reduced by as much as 50% and many other benefits in subsequent processing which result in better yarns and higher quality fabrics.

Outstanding among the many advantages which distinguish the Whitin EVEN-DRAFT drawing frame are:

- Runs up to 400 feet per minute — on all fibers up to 3" — depending upon mill conditions and production needs
- Cleanliness — Clearer waste and fly efficiently removed by Pneuma-Clear units on each delivery — an indispensable essential to satisfactory operation — available only on WHITIN EVEN-DRAFT
- Four over Five drafting units — no rolls to remove or replace, simple to set
- Superb sliver quality — Variations: carded 12-16%; combed, 10-14%; synthetics, 10-14%
- Advanced design — Two independent four-delivery heads, heavy vibration-proof precision construction, overarm weighting, electronic stop motions and signal lights; 14" — 15" — 16" cans, 36" or 42" high

*TRADE MARK

For complete information, ask your Whitin representative — or write direct to us.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

FOR THE TEXTILE INDUSTRY'S USE—

neutral tone that is said to be easy to shade and is recommended in dark shades as one of the best navies in respect to light changes. Called Sandothrene Dark Blue N2B, the dye is said to have very good all around fastness properties. Fastness to light is 200 hours in dark shades. Ten successive wash tests with chlorine were said to show no effect on the shade.

(Request Item No. L-13)

Lift Truck Weighing Device

A 5,000-lb. capacity weighing attachment for fork lift trucks, accurate to 0.2% of its

capacity, is now available on the 3,000, 4,000 and 5,000-lb. Clarklift model trucks manufactured by the industrial truck division of Clark Equipment Co.

According to Clark, the high degree of accuracy of the weighing device makes it practical for such applications as checkweighing receivables, weighing intra-plant shipments, inventory control by weight, batch process weighing and checkweighing freight shipments. Use of a lift truck mounted weighing attachment is said to reduce travel and eliminate frequent pick-ups and set-downs required when floor scales are used.

Controls for the device, including weight indicator, are mounted on the lift truck steering column within fingertip reach of

the operator. The weighing mechanism is mounted between upright and fork plate. There are no mechanical linkages, knife edges or moving parts in the weighing mechanism. Accuracy of weight measurement is reportedly affected by position of load, even when load is carried on one fork.

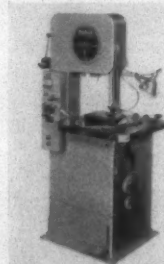
Developed jointly by Clark and Baldwin-Lima-Hamilton Corp., the unit utilizes a steel column rather than a spring to support load being weighed. Weight of the load is applied to a steel column in a load cell. The resulting compression is sensed by a strain gage and translated into pound readings on the instrument panel. A zeroing out control permits the operator to discount weight of pallets or containers if only net weight of the load is desired. Circuitry of the device utilizes transistors and condensers and is designed for rugged industrial use. Overload stops protect the system from severe shocks.

(Request Item No. L-14)

Colloidal Silica

Nalcoag, a colloidal silica now available from National Aluminate Corp., can be used in frictionizing textile fibers. The result is said to be greater strength, better fiber parallelization and more uniformity of fiber dispersion in blends. The product is offered as a suspension of 15, 30 or 35% silica in an aqueous medium or 22% silica in an aqueous-alcohol medium. Nalco Bulletin K5 describes the physical and chemical properties of Nalcoag, and lists present and potential uses. (Request Item No. L-15)

Contour Sawing Machine



The newly developed Model 16M Contour Sawing Machine, developed by The DoAll Co., will quickly shape the parts needed for maintenance work faster, cheaper and more safely than if made by milling machine or shaper, the company reports. There are few material limitations, it is said, because its 50 to 5,200 f.p.m. range provides the proper speed for every job, from very slow for band filing to very fast for friction sawing of light sheet.

Speed change is said to be so easy that it encourages the operators to use the best speed for every job, as shown on the built-in job selector. The variable speed drive and geared 2-speed transmission are designed to efficiently apply the full 1 h.p. to the cut throughout the speed range.

Operator fatigue is said to be eliminated by foot controlled power feed. The accurately surface-ground work-table is etched and a work light provided so that close

NON-FLUID OIL

TRADE MARK REGISTERED

PREVENTS SPOILAGE IN CARD ROOM

If spoilage loss due to spattering oil is cutting down your production, you should change to NON-FLUID OIL, the "drip-less", "waste-less", modern lubricant.

Most of the leading textile mills use NON-FLUID OIL for carding machinery because this superior lubricant stays in bearings and off goods.

NON-FLUID OIL prevents bearing wear, thus maintaining accurate adjustment of Doffer and Top Flats. It lasts six to eight times longer in Comb-Boxes, prevents heating, cam wear, dripping and spattering.

Increase your production by using NON-FLUID OIL. Send for Bulletin T-5 and a free testing sample and learn why card room overseers in seven out of ten mills prefer NON-FLUID OIL.

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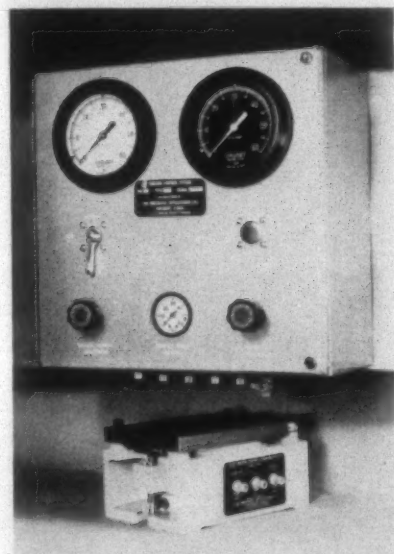
NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

work may be performed without eyestrain. It tilts to a full 45° for the many angle cutting jobs.

The table tilt feature, together with the mitering attachment, is particularly valuable to process industries. Compound and simple angles are quickly cut for making up special fittings and complex piping systems. The speed and power of the Model 16M is also important to these industries for cutting stainless steel, Monel and other tough alloys. A larger version, the Model 30M, is also available for shops requiring up to 30" throat depth.

(Request Item No. L-16)

Tension Controller



The Pneumatic Applications Co.'s new P/A Automatic Tension Controller is said to be more compact, permitting easier installation and operation.

A new production model of the P/A Automatic Tension Controller has been announced by the Pneumatic Applications Co. The major improvement in the new model is said to involve the repackaging of the equipment with a more compact control panel in a heavy steel enclosure and a cast aluminum transmitter housing. The new design is said to permit easier installation, simpler operation and greater adaptability. The basic pneumatic control circuit has not been changed.

The new instrument-type enclosure used for the panel mounting shields control system components from the usual dusty mill atmosphere while permitting accessibility for servicing. The cast aluminum transmitter design incorporates a rugged T-slotted steel top-plate for ease of mounting load-sensing roll with 10° or more of fixed angular wrap. It is utilized in combination with air-actuated friction brakes, clutches or any type of pneumatically controllable variable speed drive system.

Following are features cited for the controller:

(1) The load span of the standard range of transmitter will control tensions from a few ounces to more than 50,000 pounds.

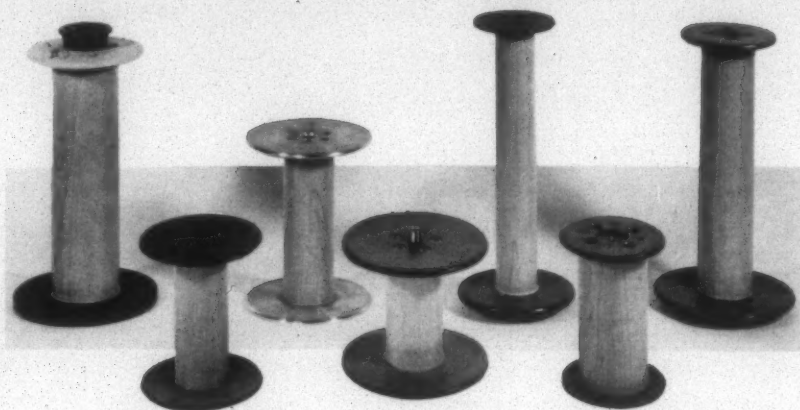
(2) Accuracy is not a percentage of load span, which means the system is responsive

WORLD'S MOST MODERN SPOOL PLANT

Assured uniformity to 5/10,000 inch!

AKRON PRECISION SPOOLS

run better, last longer



AKRON SPOOL Firsts—

- 1—Bearingized spindle tubes—accurate to 5/10,000 inch
- 2—Built-in concentricity—AXIALLY TRUE
- 3—Machine swaged and precision reamed spindle tubes
- 4—First real quality spools regardless of price
- 5—Push button uniformity in production lines
- 6—First SPINDLE SAVER spools
- 7—Spools balanced under yarn load—not empty
- 8—First take-up shafts with T-lock gudgeons. (Patent pending)
- 9—Perfect CONCENTRIC CONE screw heads
- 10—FEATHER FREE slots in twister spools
- 11—First truly successful nylon tire cord twisting spools
- 12—FIBRE FILLET Whitin spools

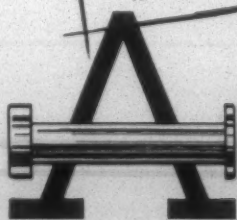
AKRON SPOOLS are fantastically accurate . . . always true.

12 years of successfully solving the spool problems of the leading—

. . . tire cord manufacturers

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. . . cotton and synthetic yarn industry



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HIGH POINT, NORTH CAROLINA

FOR THE TEXTILE INDUSTRY'S USE—

to load changes of a fraction of a pound at any control point. Performance is uniform, consistent and reproducible at will by the operator. There is no possibility of unstable control or "hunting."

(3) Extreme simplicity of operation allows unskilled personnel to run production equipment with a minimum of instruction.

(4) In the event of failure of any component in the automatic system, the controller can be manually operated to prevent loss of production while repairs are being made. (Request Item No. L-17)

Silicone Water-Repellents

Soluol Chemical Co. is offering three new durable silicone water-repellents, each developed for a specific purpose. Aquagard-C is said to provide the first commercially available silicone water-repellent for "pure finish" applications to cottons that is durable to both dry-cleaning and laundering. Aquagard-LC is a low-temperature-curing silicone water-repellent applicable, with or without the use of resins, to synthetics and blends of synthetics with natural fibers. Aquagard-W is a silicone water-repellent for woollens said to require no curing and to be applicable by either the exhaustive method or by padding.

All three new Aquagards are applied in conventional manner and do not require special equipment. In conjunction with these three new products, Soluol is continuing to furnish its previously established Aquagard and Aquagard-SX (concentrated) utility silicone water-repellents for general purpose applications.

(Request Item No. L-18)

Lanolized Wash-And-Wear

Lanolized Inc. has announced the successful development of Lanolized-WW finish directed particularly to wash-and-wear requirements. Lanolized-WW has been in laboratory research for nearly two years in efforts to add increased washability to the finish. The new product, it is reported, now has excellent durability and effectively fulfills the widespread need for a "natural hand" in most resined fabrics.

The finish is applicable to cottons, synthetics and blends. It is said to minimize the harsh and often disagreeable surface feel and hand that some wash-and-wear resins tend to give.

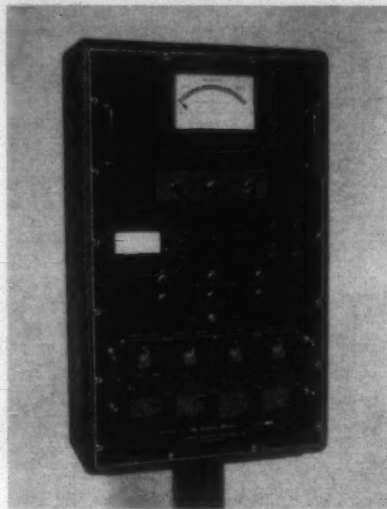
In addition to improved hand, the finish is said to increase tear strength, abrasion resistance and soil resistance. It will not scorch at elevated temperatures. It is non-chlorine retentive and sharply reduces needle-cutting. No adverse effect has been discovered in the use of Lanolized-WW associated with dye shades, lightfastness or controlled whites. The emulsions are stable on storage and generally compatible with resins, catalysts and auxiliary agents commonly used in textile finishing.

It is applied and dried in conventional equipment and fabrics finished and/or after-

finished with Lanolized-WW alone require no curing. When urea-formaldehyde and melamines are used in conjunction with Lanolized-WW, curing time and temperatures would follow the recommended procedures associated with these resins.

The new finish is being licensed by Lanolized under its patents, patents pending and trademarks. (Request Item No. L-19)

Moisture Control



Strandberg Engineering Laboratories, working jointly with Tubular Textile Machinery Corp., has developed this new, completely automatic moisture control for slashers and dryers.

A new moisture control unit for slashers and dryers has been added to Strandberg Engineering Laboratories' line of moisture indicators and controls. The new Model M-600 Moisture Monitor is an automatic moisture control for slashers and dryers that requires no calibration and can be adjusted in terms of per cent regain or per cent moisture content for essentially all weights of fabrics, yarn and fibers. Controls such as "per cent cotton" and "per cent viscose" are said to avoid essentially all bone dry correlations. Other features include simplicity of design, standard American-made plug-in components, spare parts kit, stop motion for wet warps or fabrics, direct connection to recorders of all types, and interchangeable timers. Each motor is driven and calibrated directly in seconds and tenths of seconds to cover all possible speed ranges. (Request Item No. L-20)

Adjustable Speed Sheave

A new simplified design, stationary control adjustable speed sheave—the Adjustex sheave—has been introduced by Allis-Chalmers. The Adjustex sheave is available for A, B and C section belts in 2, 3 and 4-groove construction. Pitch diameter sizes parallel the former Vari-Pitch sheaves. One entirely new diameter for C section belts—7.5/9.7" pitch diameter—is available for higher speed and wider speed range applications. Design capacities to 75 h.p. are covered by 33 sizes.

A completely new concept of pitch diam-

eter adjustment is said to be featured in this sheave. Patented interdigitated lug disc design is retained. Adjustment is made through a single adjusting screw and a hollow lock screw. Relative position between stationary and movable discs is positively maintained at all pitch diameters without disc to main sleeve set screws, it is reported.

Adjustex sheaves are said to offer economy through reduced initial cost, reduced maintenance cost, lighter weight, reduced over-all length, reduced bearing loads and improved balance at all pitch diameters.

(Request Item No. L-21)

Speed Reducer

Introduction of new Shaftex shaft-mounted speed reducer in sizes up to 40 h.p. and with nominal internal gear ratios of 5-to-1, 15-to-1 and 20-to-1 has been announced by Allis-Chalmers Mfg. Co. A completely enclosed unit for direct mounting on the driven shaft, the Shaftex reducer is available in single and double reduction units. It can be easily adapted without disassembly to include back stops where reverse rotation is prohibited and overload releases for chokable conditions, the company reports.

The Shaftex reducer is usually driven by a fixed pitch diameter Texrope drive. Variable speeds can be obtained by using either stationary control or motion control Vari-Pitch sheaves.

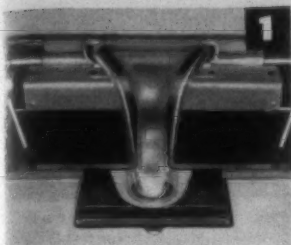
For a higher degree of positive ratio transmission, the company says the Shaftex reducer can be operated with a Timetex timing belt drive. The Shaftex reducer's flexibility and simplicity results in substantial savings in space and weight. Construction and operating features of the Shaftex speed reducer are described in a new bulletin, 20B9053. (Request Item No. L-22)

Air Dryer And Receiver

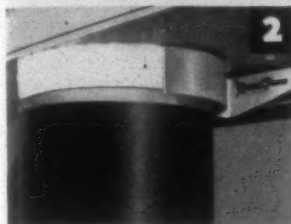


Van-treated air is moisture free for use with various pneumatic devices and processes used in the textile industry.

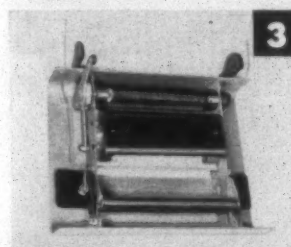
A compressed air receiver tank with built-in air dryer has been added to Van-Air series, according to Van Products Co. This single unit is designed to purify and dry the air to zero-dewpoint quality, and to



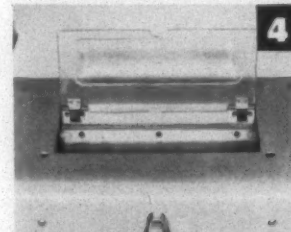
NEW WEB ENCLOSURE FOR COMPLETE WEB PROTECTION



NEW CENTRI-GUIDE FOR PRECISE COILING



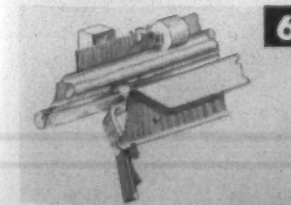
NEW CLEARER PRESSURE PLATES FOR CLEANER ROLLS



NEW CLEARER COMB COMPACTOR FOR LESS ROLL PICKING



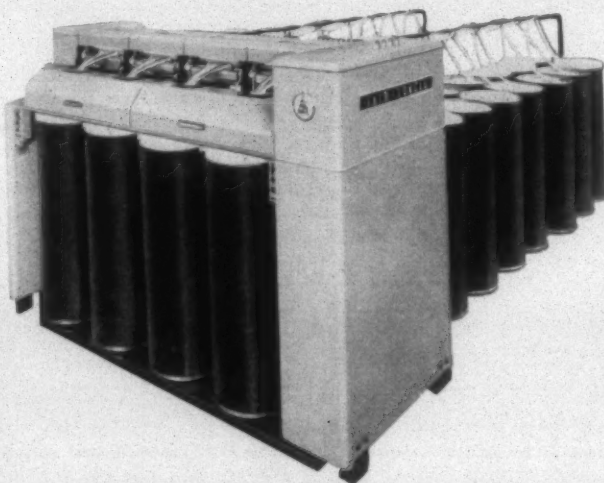
NEW SLIVER GUIDE FOR POSITIVE SLIVER CONTROL



NEW CLEARERS FOR CLEANER LIFTING ROLLS

11 More Reasons Why

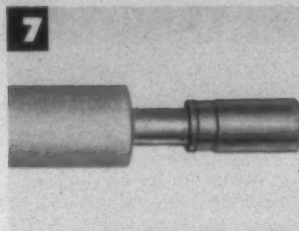
SACO-LOWELL VERSAMATIC DRAWING IS BEST



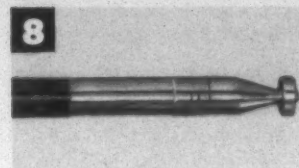
It all adds up to one fact
a Versamatic installation assures you of highest production of quality sliver by every standard

- PER DELIVERY
- PER MAN HOUR
- PER HORSEPOWER
- PER SQUARE FOOT OF FLOOR SPACE

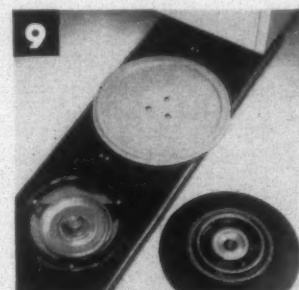
Write for 1958 Saco Lowell Bulletin featuring Versamatic Drawing Frames for complete information.



NEW ANTIFRICTION TOP ROLL BEARINGS FOR LONGER, CLEANER LIFE



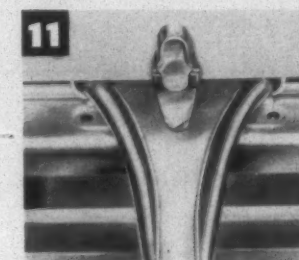
NEW ANTIFRICTION SECOND BOTTOM ROLL IS LUBRICATED FOR LIFE



NEW ANTIFRICTION TURNTABLE FOR SMOOTH TURNING WITH LARGE CANS



NEW OIL INDICATOR ON COILER GEAR BOX FOR VISUAL OIL CHECK



NEW STOP MOTION FOR ALL LINES OF ROLLS REDUCES WASTE



SACO-LOWELL TEXTILE MACHINERY DIVISION
SACO-LOWELL SHOPS

Executive & Sales Offices — EASLEY, S. C.
Branch Sales Offices — ATLANTA, GA. BOSTON, MASS. CHARLOTTE & GREENSBORO, N. C.

FOR THE TEXTILE INDUSTRY'S USE—

store and deliver the air clean and free of moisture to overcome fouling and corroding of instruments, air tools, controls, circuits, finishes, chemicals, etc. This compact, single-vessel design is said to require a minimum of space, installation, maintenance, inspection and insurance. It is said to operate without heat, regeneration or regulation, with no volume loss and less than 1% pressure drop. Capacities up to 8,000 s.c.f.m. and 6,000 p.s.i.g. Bulletin D-R describing the unit is available.

(Request Item No. L-23)

Gearmotors

The Lima Electric Motor Co. has announced the addition of a complete range of sizes of gearmotors to their present line of Selective-Speed Lima gearshift drives and industrial electric motors.

Called the Lima Gearmotor, this new line consists of single, double and triple reduction units, integrally motor mounted, with Duti-Rated Lifetime gearing. Motor capacities are rated from 1 to 125 h.p., with output reduction speeds from 780 to 7½ r.p.m. They are adapted for horizontal foot mounted applications.

Designed to meet most service requirements, Lima Gearmotors are available in standard open dripproof construction for general purpose use; totally enclosed fan-cooled for dusty or high humidity atmos-

pheres and explosion proof for hazardous locations.

Standard electrical characteristics of the Gearmotors are: Normal torque, 3 or 2-phase, 60-cycle, 208, 220/440 or 550 volts. Special voltages and frequencies, along with mechanical modifications are available.

(Request Item No. L-24)

Cibacron Red

A new development in the Cibacron fiber-reactive dye series has been introduced by the Ciba Co. The new dye, Cibacron Brilliant Red B is described as a level-dyeing, fast color with an attractive, medium red shade of exceptional brilliance. Its application to cellulosic fibers and to wool follows the regular dyeing and printing procedures which have been established for the Cibacron group.

Dyeings and prints produced with Cibacron Brilliant Red B are reported to exhibit very good all-round fastness, especially on goods which are not subsequently subjected to chlorine treatment. Fastness to washing, perspiration and other wet treatments promotes lasting color life in clothing and household fabrics through numerous use and laundering cycles, Ciba reports. Lightfastness is high, considering the brightness of the shade. Dyeings and prints are stable to most resin finishes and coatings, though care should be exercised in such treatments in order to protect the lightfastness of the dyed shade.

The new dyestuff is said to offer ex-

cellent color value in dyeings and prints on cotton, rayon and wool. Its strong build-up in heavier depths is particularly important in printing. The clean red color is very interesting for producing bright reds and pinks, as it is said to be neither too blue nor too yellow. Its use with other Cibacron dyes provides improved scarlets and oranges for a number of fashion shades.

(Request Item No. L-25)

Air Handling Units

Air-conditioning air handling units in 3, 5, 8, 10 and 15-ton capacities, designed with an improved "free-throw" plenum chamber and with a simply installed heating coil accessory, have been introduced by Typhoon Air Conditioning Co., division of Hupp Corp.

The units may be suspended from the ceiling or recessed into the wall so that they take up no valuable floor space, Typhoon reports. Designed for "free throw" or duct work installation, the plenum used for "free throw" is said to distribute air effectively without drafts. The large capacity blowers overcome air resistance in duct work installations to provide full rated cooling. Coils are constructed from seamless copper tubes with bonded helical fins to provide maximum heat transfer.

The units may be used with water-cooled or waterless air-conditioning, or as parts of chilled water systems. Available with hot water or steam coils, they may also be used for heating. (Request Item No. L-26)

BLACK MAGIC HAS PRODUCED A MIRACLE IN SPINNING RINGS

Lubri-Cased®

for

- highest traveler speeds
- longest traveler life
- more production at less cost
- fast break-in



KLUTTZ RINGS, Inc.
GASTONIA, N. C.

For the Mill Bookshelf

Heat Exchangers

New heat transfer bulletin No. 123-6 contains product information and selection data for storage water heaters and heat exchangers manufactured by the Patterson-Kelley Co. Equipment includes copper-lined, copper silicon, cement-lined and steel (horizontal and vertical) storage heaters and 2 and 4-pass convertors. Selection data consists of tables of hot water fixture capacities, temperature conversion factors, heating and storage capacities; standard dimensions, weights and connections; plus line diagrams and typical applications of data. The new 8-page bulletin also annotates catalog information available for specific types of heat exchange equipment.

(Request Item No. L-27)

Antara Chemicals Catalog

Antara Chemicals, a sales division of General Aniline & Film Corp., is offering an expanded and completely revised chemicals catalog. For convenience, the catalog is divided into separate sections devoted to surfactants, organic intermediates, acetylene derivatives, carbonyl iron powders, ethylene oxide and glycols and numerous specialty chemicals, including optical brighteners, ultra-violet light absorbers, etc. The new 64-page catalog describes the composition, properties and uses of Antara products.

(Request Item No. L-28)

Ansul Chemical Catalog

Ansul Chemical Co. is offering a new catalog on two methyl ethers of hydroquinone. The catalog discusses the physical and chemical properties, specifications, toxicity and applications of hydroquinone dimethyl ether and hydroquinone monomethyl ether. Ansul's trade names for the chemicals are D.M.B. and H.A. The catalog's bibliography lists 25 reference sources for additional information and is one of the most complete ever assembled. It is one of a series on Ansul industrial chemicals. The publication was designed for use by companies who use derivatives of hydroquinone in their manufacturing processes or are investigating new specialty chemicals.

(Request Item No. L-29)

Waste Treatment

The Dow Chemical Co. has completed a 32-page bulletin about Dowpac, the company's new plastic packing material used in the biological oxidation of liquid wastes. According to Dow, the bulletin is of interest to all persons concerned with industrial waste disposal. The bulletin contains illustrated information on the product's physical properties, assembly instructions and operational characteristics. Titled

"Dowpac Applications in Waste Treatment," the bulletin gives information on the wide design latitude possible with Dowpac, and includes performance data gathered from a variety of pilot plant installations. (Request Item No. L-30)

Scott Tensile Tester

Scott Testers Inc., manufacturer of physical testing equipment since 1899, is offering "CRE Tensile Tester Bulletin," a six-page illustrated brochure describing entirely new Scott constant-rate-of-extension tensile elongation tester, with ultra-precise electric weighing, for stress-strain evaluation of all materials in the range 0-05 lbs. to 0-1,000 lbs. or 0-25 grams to 0-500 kgs. tensile. The unit is said to feature low cost resulting from a new design concept permitting a basic tester tailored to user's application, with additional options to provide laboratory versatility, and over 150 Scott clamps and holding fixtures for conformance with A.S.T.M. and I.S.O. methods.

(Request Item No. L-31)

Fabric Research Laboratories

Fabric Research Laboratories Inc., research and development consultants in fibrous, organic and related materials, has announced the publication of four pamphlets descriptive of certain services performed by the organization. Titles of the pamphlets are: "Textile Electronics," describing the unique demands of electronic innovations in the textile industry; "Fiber Identification Service," identification and quantitative analysis of specialty and fur fibers, wool, vegetable fibers, man-made fibers and blends; "Patent and Legal Services"; and the "FRL Partial Unit Plan," a research program specifically designed for the needs of small and medium sized businesses.

(Request Item No. L-32)

Textile Chemicals

A new booklet, "Textile Chemicals For Dyeing, Bleaching and Finishing," has been published by Mac Chemical Co. The booklet covers characteristics and uses of the firm's line of softeners including the cationic and surface active types and scouring agents. Also included is a table of conversion factors and a Centigrade-Fahrenheit scale.

(Request Item No. L-33)

Traveling Cleaner

The Parks-Cramer Co. has issued Bulletin H-75, "Spinning Frame and Room Cleaning." The publication describes the company's combination frame and room cleaner which is designated Type CTG. The cleaner features the "elephant trunk" attachment

which is said to up-grade standards of cleaning excellence. The Type CTG cleaner uses a single carriage, a single motor and a single fan to clean frame, underframe and overhead areas. The bulletin gives full specifications and details of the operation of the cleaner. (Request Item No. L-34)

Corrugated Boxes

Nine basic rules for efficient stacking and loading are discussed in a new edition of "How To Stack and Load Corrugated Shipping Boxes," a booklet published by Hinde & Dauch. New copy and detailed illustrations describe effective methods of estimating storage space, distributing load weights, handling, identification and the use of gates, bulkheads, barricades and weatherstripping. The new 16-page booklet is No. 2 in the company's Little Packaging Library series.

(Request Item No. L-35)

Industrial Burners

The new Iron Fireman Mfg. Co.'s series of AirRing industrial burners, with built-in fuel and air systems, is described in Folder No. 5807. These packaged units are available for gas, oil or dual fuel; natural or induced draft; Scotch or any other type of boiler. Detailed cutaway views, diagrams and photographs illustrate how the integral air register improves combustion and reduces installation costs by eliminating need for ignition arch, air tunnel, checkered combustion chamber or other underfloor construction. Dimensions are included.

(Request Item No. L-36)

Heating And Ventilating Unit

The American Air Filter Co. has released a new product bulletin describing its complete line of Herman Nelson heating and ventilating units. The units are available in 12 sizes with capacities ranging from 600 to 73,000 c.f.m. The bulletin (No. 910) gives complete information on coil selection for both steam and hot water. Capacity tables, air resistance charts and r.p.m. and horsepower tables are given. Also included is a section on dimensions and standard arrangements. (Request Item No. L-37)

Lindly Research

Lindly & Co., producers of diversified devices and systems in photoelectric, infrared, optical electromechanical and electronic fields, has prepared a brochure describing the company's facilities and experience available for research and development. The Lindly organization is now offering its facilities as a research and development source to other firms interested in such services. (Request Item No. L-38)

Serving The Textile Industry

Kluttz Rings Names Southern Representative

Kluttz Rings Inc., Gastonia, N. C., manufacturer of textile rings and accessories, has appointed Smith, Crawford & Teat of West Point, Ga., to represent it in the sale of rings in Georgia, Alabama and Tennessee.

F. A. Young Machine Co. Purchases Additional Space

The F. A. Young Machine Co. of Gastonia, N. C., has leased an additional building of 4,000 square feet on Price Street in Gastonia to be used chiefly for the assembling of the firm's NYAF 39 and Vertical Y spinning frames. F. A. Young, company president, said that the expansion has become necessary because of increased orders on both types of frames. The NYAF 39 can now be completely assembled away from the mill, with minimum erection needed in the mill itself. The same is true of the 24" Vertical Y machine which is said to feature the only straight line spinning on the market. Both frames cover a range of 2½ to 4", up to 364 spindles in length.

Standard Screw Co. Names Greenville (S. C.) Division

The Hartford-Greenville Division is the new name being given on January 1 to the manufacturing plant at Greenville, S. C., producing Hartford spindles and textile machine parts. Originally this plant was a branch of the Hartford (Conn.) Machine Screw Co., which in turn was a division of Standard Screw Co. With the expansion of manufacturing facilities at Greenville this plant has developed into a complete production entity augmented with special engineering and development facilities for the textile industry, and the name Hartford-Greenville Division recognizes it as a complete unit of the parent company. The address is P. O. Box 1776, Greenville, S. C.

Small Creslan Production Unit Set Up By American Cyanamid

American Cyanamid Co., New York City, has begun construction of a small-scale special production plant adjacent to its new Creslan acrylic fiber plant in Santa Rosa County, near Pensacola, Fla. The prototype unit, scheduled for completion next Fall, will permit continuing improvements in processes and products, will serve as a trial area for new equipment and techniques, and will speed the production of custom lots of fiber.

The new unit's major advantage to customers of Cyanamid's fibers division will be to speed the translation of laboratory find-

ings into production, according to Dr. Nat H. Marsh, manager of the Santa Rosa plant. Small lots of fiber, needed by mills and other processors to prove out laboratory findings, will be quickly produced and delivered without disrupting operations of the main plant.

The new plant unit will include complete facilities for polymer preparation, and spinning, drying and finishing of Creslan staple and tow. The facility will draw raw materials and utility services from the Santa Rosa Plant.

In describing the project, Alden R. Loosli, general manager of fibers division, pointed out that the new small-scale plant will increase the efficiency and versatility of Cyanamid's fiber production operations. It will permit constant improvements in fiber processing techniques and equipment at the ultra-modern Santa Rosa Plant, he said, and enable the company to deliver small custom lots of Creslan without shut-downs or other lags in the volume of production in the main plant.

The Pneumafil Corp. Leases Part of Thrift, N. C., Plant

The Pneumafil Corp., Charlotte, has signed a long-term lease for 35,000 square feet of space on the first floor of the former Kendal Cotton Mills plant in Thrift, N. C., near Charlotte.

Pneumafil will continue operations at its present plant on Wilkinson Boulevard in Charlotte. It will use the Thrift location to expand its production facilities. The 2½-story former textile mill is located on a 22-acre tract served by the Piedmont & Northern Railroad.

Fletcher Southern Formed To Produce Narrow Loom Parts

Fletcher Southern, the newest textile equipment firm in the South, has been organized under the direction of Edward T. Taws Jr., the firm's major stockholder. The new company has purchased a one-story steel and concrete building, completely air-conditioned, on a 20-acre site on U. S. Highway No. 1, at Southern Pines, N. C. Taws, who is vice-president of The Fletcher Works of Philadelphia, Pa., manufacturer of narrow fabric looms, twisting and winding equipment and centrifugal extractors, will resign his present position in December to assume the executive post in the new company.

A 1956 graduate of the University of North Carolina, Taws has been in constant contact with Southern textile firms during the past several years. Fletcher Southern will manufacture shuttles, blocks, battens and other components of narrow fabric looms. The new firm will also act as Southern agent for the Fletcher Works of Philadelphia which has been in operation

for 109 years, and will warehouse parts for looms, twistors and extractors so that it can provide immediate delivery to any mill in the South.

American Enka Corp. Doubles Nylon Capacity

Directors of American Enka Corp. have authorized a \$7,500,000 expansion of the company's nylon plant at Enka, N. C., which will double its capacity. This will be Enka's second nylon expansion program—the first was completed this year—since Enka began nylon production in 1954.

Currently the enlarged facilities are said to be operating at close to capacity.

Enka President J. E. Bassill pointed out that the decision to proceed with another expansion program was based on the company's satisfactory experience in the manufacture and sales of Enka nylon, which has been successfully adapted to a variety of end-uses. Designed to provide Enka with a well-rounded line of nylon yarns in various deniers, lusters and put-ups, the new addition will go into production by early 1960. When the enlarged installation is in full operation, plant personnel will be increased by more than 300 employees.

Bassill said new construction to house the enlarged operation will adjoin the present building and will range from one to six stories in height.

The Todd Co. Offers Free Check Analysis

Availability of a free check analysis service for the textile industry primarily to help its members re-design their checks for electronic bank bookkeeping has been announced by the Todd Co. Division, Burroughs Corp., Rochester, N. Y. The service will be provided by the firm's new check analysis and design department, created to assist banks and commercial firms in re-designing their checks to meet the needs of the new electronic bookkeeping equipment already installed in hundreds of banks across the country and on order by hundreds more.

In addition to rating a check on its adaptability to electronic processing, the analysis chart to be forwarded by the department will also appraise it on 12 other points, including general efficiency, arrangement for accurate bank handling, advertising and public relations values, color, typography, general layout, and safeguards provided against alteration and forgery. To take advantage of the service, companies should send a sample of the check or checks they use to the attention of the check analysis and design department, Todd Co. Division, Burroughs Corp., P. O. Box 910, Rochester 3, N. Y. Check samples should be cancelled by an all-zero check-writer impression on the amount line.

er Supermarket



"Darn it, if Kruger had been using Dillard bags, we wouldn't have lost our money!"

Dillard PAPER COMPANY

GREENSBORO • CHARLOTTE • RALEIGH • WILMINGTON • WINSTON-SALEM • ATLANTA • MACON • AUGUSTA
GREENVILLE • COLUMBIA • SPARTANBURG • ROANOKE • BRISTOL • KNOXVILLE • NASHVILLE • BIRMINGHAM

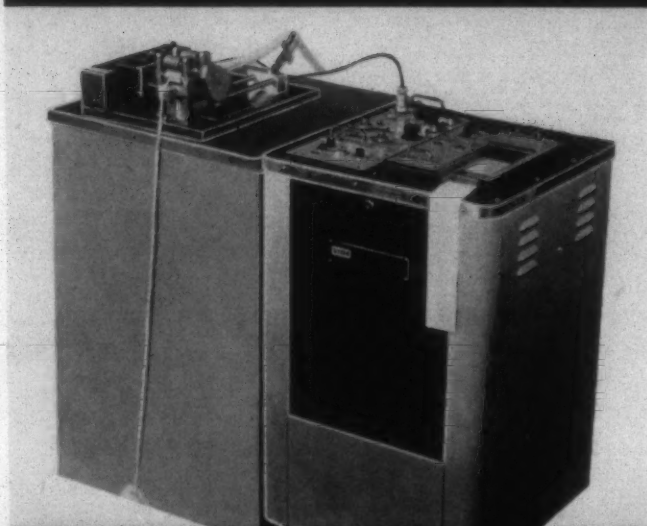
1926

"IF IT'S PAPER"

1958

USTER LICKS YOUR FIBER DRAFTING PROBLEMS!

WEST POINT COHESION TESTER PREDICTS!



- PREDICTS effect of roll spacing
- PREDICTS effect of bi-directional drafting
- PREDICTS effect of humidity
- PREDICTS effect of draft

Provides fast and efficient cohesion test for maximum fiber control and proper blending in processing. Eliminates numerous tests for fiber length, fiber fineness, surface characteristics, wax content, etc. Compensates for variations in raw material to achieve optimum twists for roving. Determines drafting properties of synthetic, natural and blended staples. 1 1/8" minimum, 8" maximum roll setting.

THE USTER SPECTROGRAPH PROVES!

- PROVES production machinery settings
- PROVES mechanical condition of machines
- PROVES short, medium, long term variations
- PROVES final fabric appearance in 4 to 6 minutes

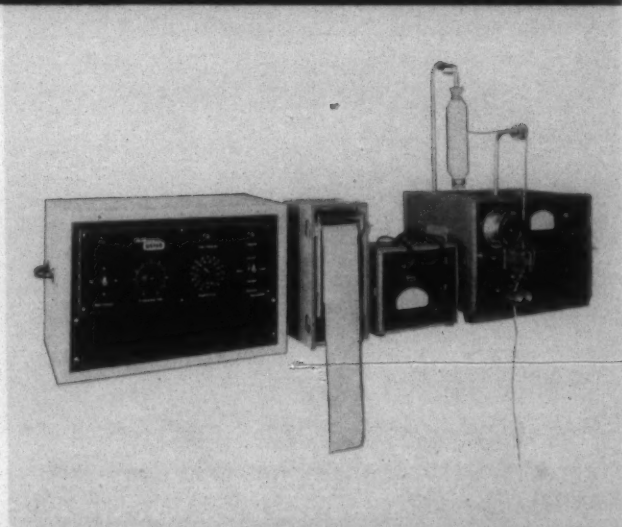
The Uster Spectrograph introduces an entirely new concept of fiber control during processing. The Spectrograph describes mechanical troubles and machinery setting faults in the drafting zone. Simultaneously with the operation of the Evenness Tester, the Spectrograph automatically analyzes short, medium and long term variations. The result is stored on numerous channels with the Spectrogram chart delivered in 4 to 6 minutes.

FOR THE COMPLETE PICTURE WRITE, WIRE OR PHONE USTER.

SALES OFFICES:

U. S. Sales Offices: Atlanta, Georgia;

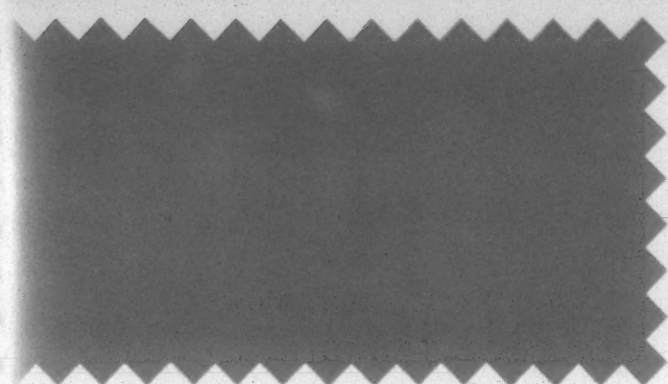
Canadian Sales Offices: Hugh Williams & Company, 27 Wellington St., East Toronto 1, Ontario



USTER
CORPORATION
CHARLOTTE
NOR. CAROLINA

USTER

CONTINUOUS QUALITY CONTROL IN MANUFACTURING



*This swatch closely approximates the self-shade
obtained on cotton fabrics when "Ponsol"*

*Golden Orange 2BG Double Paste is applied at
8 oz./gal. by the Du Pont Pad-Steam Method.*

news from Du Pont

NEW! "PONSOL"* GOLDEN ORANGE 2BG DOUBLE PASTE FOR

- ... Brilliant shades**
- ... Stability in reduction**
- ... Fastness**
- ... Good working properties**

With this new "Ponsol" dye, all forms of cotton or rayon can now be dyed yellowish-orange shades that are outstanding for their brightness as well as their ease of application. This new anthraquinone vat dye can be used both for self-shades and formulated mode shades on towelings, shirtings, drapery and upholstery fabrics, sewing threads, and other materials. It offers good fastness, and is especially outstanding for the way it meets the modern processing needs of dyers and printers.

New Dye Is Easy to Use

"Ponsol" Golden Orange 2BG Double Paste has good working properties; it can be dyed levelly in all types of yarn and piece goods dyeing equipment. (It can be applied in reduced dyebaths, or it can be padded on and later reduced in continuous processes such as the Du Pont Pad-Steam Continuous Dyeing Method.) This new "Ponsol" dye exhibits unusual shade stability even when it undergoes prolonged reduction at high temperatures.

Gives Good Results in Printing

This new vat dye also lends itself to printing by both conventional and Savagraph techniques. It has good hangout and aging properties.

Du Pont coloring specialists will gladly help you explore the application possibilities of "Ponsol" Golden Orange 2BG Double Paste. For technical assistance or literature, just write to E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyes and Chemicals Division, Wilmington 98, Delaware.

*Reg. U. S. Pat. Off.

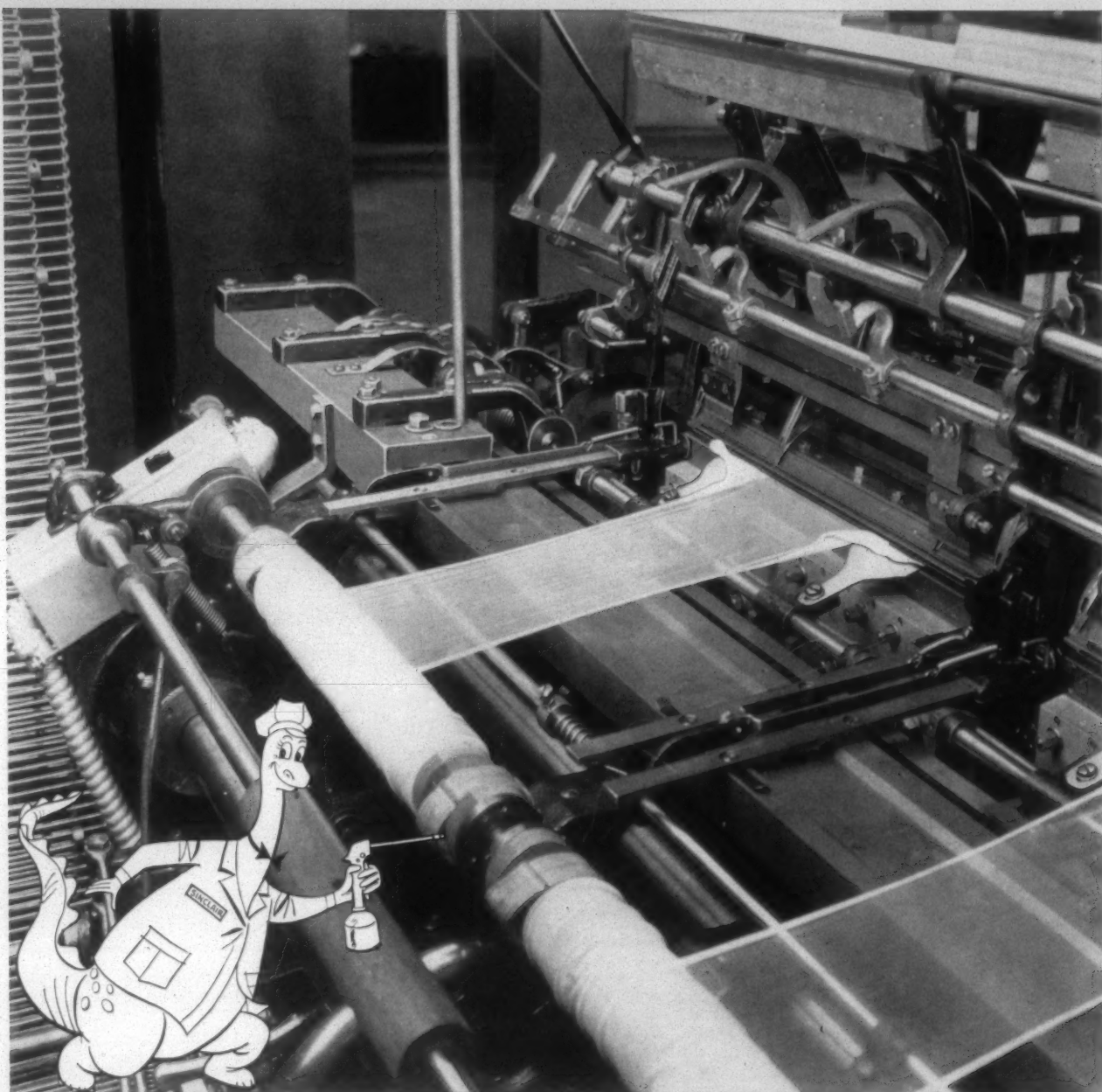
FASTNESS PROPERTIES

A.A.T.C.C. Test	Rating or Shade Change
Light (Fade-Ometer)	
1.5 oz./gal.	20 hours
6.0 oz./gal.	60 hours
Washing No. 3	Negligible to slight
Washing No. 4	Slight
Chlorine (0.3% available)	Slight
Peroxide Bleaching	Negligible to slight



DYES AND CHEMICALS

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



Makes Needles Tend to Their Knitting

Here's why Sinclair Crystoil keeps needles knitting. This specially-formulated needle oil keeps needles free of rust, resists encrustation, actually removes size or crust build-up.

Another advantage: Crystoil's light color makes it easier to wash stains out of knitted goods. And because Crystoil contains a special oiliness agent for greater anti-wear and anti-rust protection, needles last longer, too.

Look into *all* the advantages of Sinclair Crystoil or Crystoil Light (for finer gauge machines). Call your local Sinclair Representative or write Sinclair

Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR

CRYSTOIL NEEDLE OILS

Dan River Mills

In A Decade: \$40,000,000 For Modernization

IN the past ten years, Dan River Mills has spent almost \$40 million in the Danville plants on new and improved machinery to keep them efficient and competitive. This article is an attempt to not only review many of the varied phases of this modernization program but also to show the motivation for action taken. The story is timely and important to the textile industry since it reviews a modernization program which has, in large measure, been an important factor in Dan River's weathering the serious recession months of 1958 running full time and showing black earnings figures.

When you think of Dan River Mills, you must think in terms of enormity. Think of:

- (1) Over 17,000 total employees
- (2) Annual consolidated sales of \$164,000,000
- (3) Over 30,000 individual purchase orders in a year's time originating in Danville
- (4) An annual fabric production at Danville of 125,000 miles, enough to circle the earth five times
- (5) More than 450,000 spindles and more than 9,000 looms in Danville locations
- (6) 42 Saco-Lowell blending feeders feeding 21 pickers in one of three Danville manufacturing divisions
- (7) 15 Barber-Colman Draw-Tex drawing-in machines, the world's largest installation of such machines
- (8) Over 1,000 basic fabrics going into more than 25,000 different finished fabrics
- (9) A weekly Danville payroll of \$650,000

Get these facts firmly in mind and a picture of Dan River Mills comes into focus.

Most Significant Year

One of the most significant years in the 76-year history of the company was 1956. With the acquisition of Iselin-Jefferson Co. Inc., a sales organization which controlled Woodside Mills with seven mills located in South Carolina and the Iselin-Jefferson Financial Co. Inc.; and Alabama Mills with eight mills in Alabama and Georgia, Dan River Mills expanded its production facilities from about 454,000 spindles and over 9,000 looms to more than 800,000

By GUS GUGGENHEIM, Associate Editor

spindles and over 17,000 looms. Aside from the expansion and increased sales, the company became, unquestionably, one of the most highly diversified operations in the textile industry.

Prior to the expansion, Dan River was primarily a producer of fine combed cotton fabrics in a finished state with emphasis on dress goods, sportswear, shirtings, work fabrics and domestics. With the acquisition of Woodside Mills, the company obtained a producer of print cloths, synthetics and tricot fabrics. In the Alabama Mills, the company became the owner of plants engaged in the manufacture of heavy cotton goods such as corduroys and work clothing, as well as decorative and industrial goods, mostly in the unfinished state.

The public launching of a new minimum care finish, Wrinkle-Shed with Dri-Don®, is another of the company's significant 1956 milestones. The finish was developed in Dan River's research laboratories and enhanced the intrinsic value of its cotton goods to an extent that over 90% of the finished fabrics, produced for end uses requiring special finishes, are treated with it. Basically the new finish does three things: (1) imparts wash-and-wear qualities to cotton garments; (2) gives cotton garments greater crease resistance; and (3) insures permanent shrinkage control, even after tumble drying. The new finish received a nationwide advertising and promotion campaign in 1957.

Another event marking 1956 as a year of significance was the decision to install an I.B.M. electronic computer system at the mill. Men have been trained to operate the computer, programs to be handled by the computer have been worked out, the complicated machines have been installed, tested and made ready to go—all in the relatively short span of two years. The need for I.B.M.'s computer can be seen from the fact that Dan River produces, from about 1,000 basic fabrics, some 25,000 different finished goods items. And since most of Dan River's fabrics are yarn-dyed rather than piece-dyed or printed, the decision as to the end product comes at a much earlier state, i.e. before the yarn is dyed, a point fairly early in the produc-

Dan River Mills —

tion cycle. These factors make it important for Dan River to know exactly what is happening when it happens.

Other important factors in the company's decision to use the electronic computer system include the mammoth problem of maintaining inventory control of the annual 200,000,000-yard production; inventory control for repair parts for almost half a million spinning spindles and over 9,000 looms; and processing a weekly payroll of over \$650,000.

In addition to its routine textile operations, Dan River has a newly established nonwoven fabrics installation; moves machinery about the plants with its own regular construction crew; does its own building construction; does its own motor rewinding; has its own sheet metal shop; its own carpenter shop; its own machine shop; manufactures its own resins for wash-and-wear finishes; produces about one-third of the electrical energy it uses, cheaper than it could be purchased from the power company (through the use of steam turbines and as a by-product of making steam for use in dyeing and finishing); and maintains its own fleet of trucks which are used in a balanced operation for a variety of purposes including ship-



William J. Erwin



Basil D. Browder



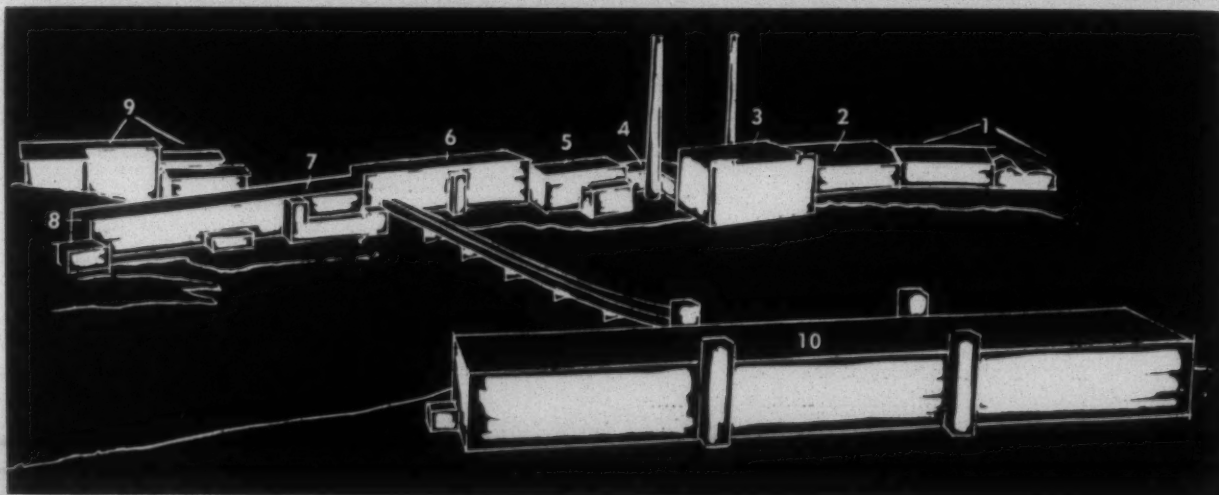
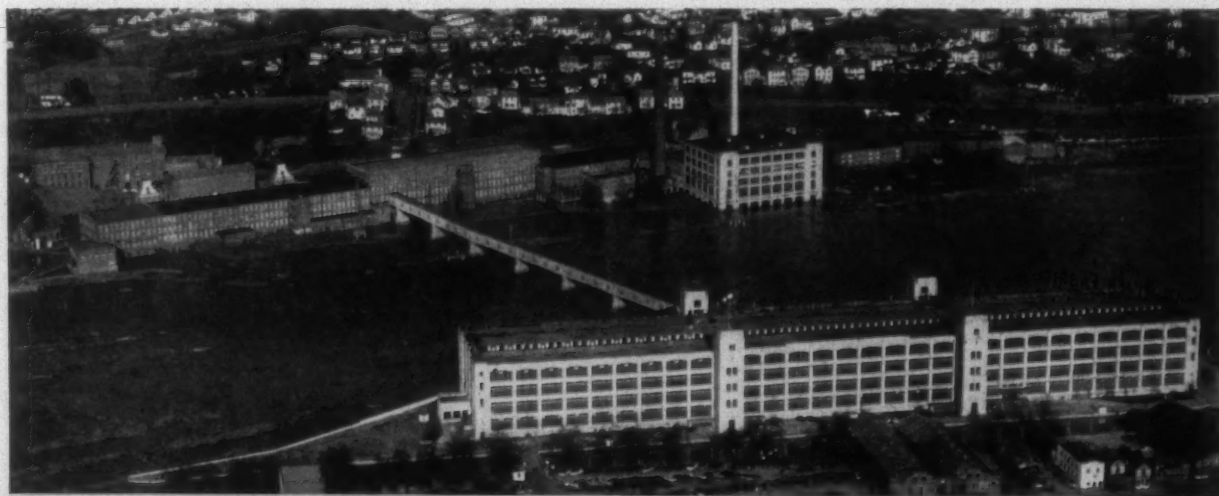
Roy M. Stephens

ments of cloth to the company's Dallas, Texas, warehouse, inter-mill movements of material between the Danville headquarters and the Alabama Division, and the transportation into Danville of chemicals and other materials needed in the processing of Dan River fabrics.

Finishing Plant Construction

Expanding uses of the company's resin finishes and an increasing production of high quality combed apparel fabrics necessitated the construction of new finishing facilities, which are known as Schoolfield Division No. 3. Started in 1951, the construction was completed in November 1952 and included additional warehousing and shipping facilities.

Many standard pieces of finishing equipment have been



Riverside Division—(1) shops; (2) cotton warehouse; (3) cotton storage, nonwoven, beam and package dyeing, raw stock dyeing; (4) powerhouse; (5) No. 7 mill; (6) No. 5 mill; (7) No. 3 mill; (8) No. 2 mill; (9) rayon dressing room; and (10) No. 8 mill. Mills No. 2, 3, 5 and 7 are principally opening, picking, carding, combing, drawing and spinning. Mill No. 8 contains spooling, warping, slashing, spinning, drawing-in, weaving, greige inspection and some piece dyeing and finishing.



DAN RIVER MILLS

INCORPORATED

Danville, Virginia



William J. Erwin
President

Basil D. Browder
Executive Vice-President

R. M. Stephens
Vice-President & General
Manager of Greige Mills

Division No. 3
J. J. Newton, Supt.
Facilities for finishing
4.5 million yards week

Division No. 1
W. D. Vincent, Supt.
164,544 spindles
2,564 looms
Dress and sport shirtings,
carded cotton suitings

Division No. 2
A. C. Copeland, Supt.
162,400 spindles
3,374 looms
Shirtings, dressgoods,
rainwear

Riverside Division
J. J. Carrick Jr., Supt.
127,264 spindles
2,322 looms
Decorative fabrics, work
clothing

Mills No. 1 & 2
Opening through greige inspection

Mills No. 3 & 4
Opening through greige inspection
including indigo dyeing

All Operations

Dyehouse

Recent Improvements:

- (1) Modernized opening and picking
- (2) New combers
- (3) Modernized drawing after combing
- (4) Modernized roving to one process (in progress)
- (5) Spinning frame modernization including drafting, cleaners and vacuum ends-down collection.
- (6) New Gwaltney spinning frames
- (7) New Model C spoolers
- (8) Air-conditioning
- (9) Air change installation
- (10) Larger loom beams
- (11) New and improved looms for sheetings
- (12) Shuttleless looms

Recent Improvements:

- (1) New combers
- (2) Lap winders
- (3) Modernized drawing after combing
- (4) Modernized spinning including drafting, vacuum ends-down collectors and cleaners
- (5) New quillers
- (6) Air-conditioning
- (7) New and improved box looms
- (8) Drawing-in machine improvements
- (9) New dye machines

Recent Improvements:

- (1) New combers
- (2) Drawing after combing
- (3) Spinning modernization
- (4) New quillers
- (5) Drawing-in enlargement
- (6) Air-conditioning

Dan River Mills

modernized or refined in their operation by the finishing division. An example of this work is V-belt driven dry cans. Due to the vibrationless transmission of power obtained from the use of V-belts, these cans can be run at speeds up to 200 yards per minute, limit being dependent upon the weight of the fabric. Normal speeds for gear driven cans are roughly 100 yards per minute regardless of the fabric weight.

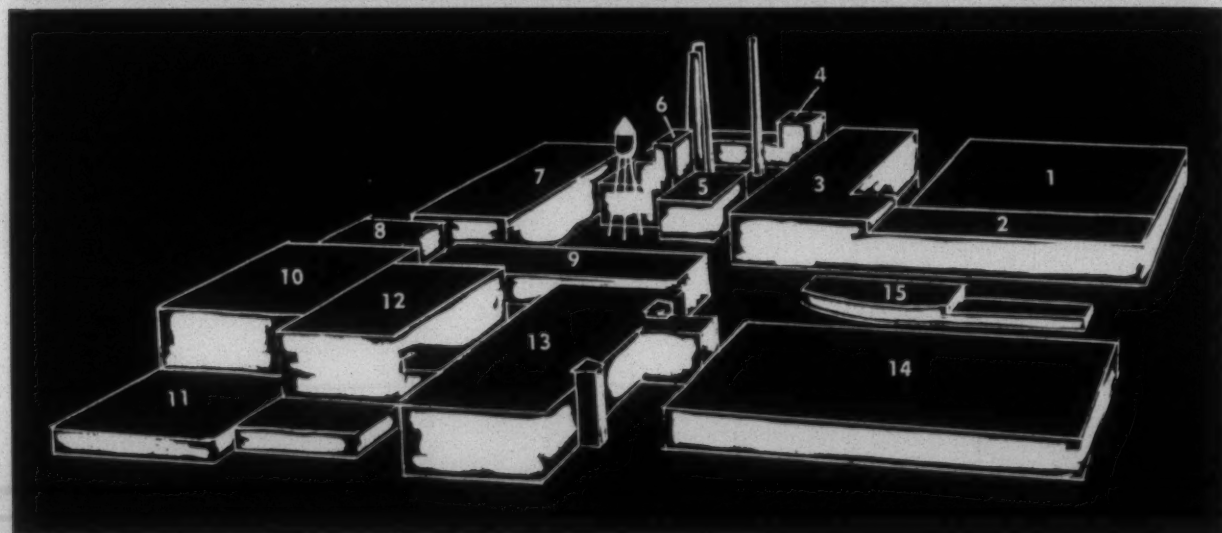
Dan River is also making important savings each year by using rubber sanforizer blankets instead of conventional felt blankets. The rubber is said to last about 25 times as long as felt. Still another Dan River refinement is the adaptation of cloth inspecting machines to take cloth out of a box, run it over an inspection table fitted with a device to mark defects, and roll it in either a small roll, a large roll or deliver it to another box.

A portion of the impressive list of new or improved equipment installed within recent times in the finishing division includes: a continuous bleaching range; a 110-inch Andrews & Goodrich curing range; a 100-inch Mor-

rison mercerizing range; a 50-inch Morrison mercerizing range; a 50-cylinder, 110-inch face, drier; numerous McKnight & Hoffman weft straighteners; a Winsor & Jerauld tenter which is 60 inches wide and 70 feet long; a 60-inch wide, 70-foot long Andrews & Goodrich double tenter; Van Vlaanderen constant speed tensionless Master dye jigs; Riggs & Lombard dye jigs; Rodney Hunt open washer; various can dryers; water softener and demineralizer; a 60-inch, 2-tank, 8-beam Progressive boil-off machine; a 64-inch Birch Bros. scutcher; a 64-inch Van Vlaanderen scutcher; and a 10-compartment soaper.

Greige Mill Modernization

A substantial part of the \$40 million modernization program was spent in the greige mills. Opening machine modernization started in Schoolfield Division No. 1 and 2. The three mills with spinning equipment, Nos. 2, 3 and 4, in these two divisions had previously been fed from one opening room. The No. 2 mill's opening has 42 Saco-Lowell F-7 blending feeders with No. 15 openers installed in seven lines of six feeders each. These blenders feed 21 modernized one-process, two-beater Saco-Lowell



Schoolfield Division—(1) 1A and 1B weave rooms; (2) No. 1 Mill; (3) No. 2 mill; (4) No. 3 dressing; (5) No. 1 dye house; (6) boiler plant; (7) No. 3 mill; (8) cotton storage warehouse; (9) cotton warehouse and opening room; (10) finishing plant; (11) No. 5 dyehouse; (12) No. 5 finishing plant; (13) No. 4 mill; (14) No. 4A and 4B weave rooms; and (15) print shop and Division No. 1 stores.

Dan River Mills

pickers and a No. 11 Saco-Lowell condenser over a No. 12 lattice opener. Before modernization the pickers had three beaters. The pickers have revolving grid bars and fringe rolls. They are equipped with Saco-Lowell pneumatic lap control and make a 51.6 pound lap which weighs 14.75 ounces per yard. The pickers also have a Saco-Lowell automatic feed control system with No. 2 overflow reserve box. Four bales of cotton are laid out behind each feeder in the opening room, making a 24-bale mix.

Schoolfield Division No. 2, mill No. 4, has six Saco-Lowell pickers, which are the same as those installed in mill No. 2. The pickers are arranged in two lines of three each. They are fed by 12 Saco-Lowell F-7 blending feeders with No. 15 openers. This is equivalent to two feeders feeding one picker. The bale lay-down, lap weight and ounce per yard are the same as mill No. 2. Blending feeder production is set at 175 pounds per hour while pickers run approximately 300 pounds per hour. The No. 3 mill's opening and picker room modernization is not yet completed but current plans call for substantially the same equipment and operation as found in mills No. 2 and 4. This modernization work has been done solely to improve the quality of the stock fed to the mills.

Comber Installation

Up until around 1954, mill No. 4 had been running carded dress goods and shirting but is now on combed gingham, dress goods, and shirting both box and dobby work. To convert the mill for combed yarns, the card room was rearranged and relighted to improve material flow and to make room for combers. The company's conventional four-roll breaker drawing, with cushion top rolls, was modernized. Four new Saco-Lowell lap winders were installed. The lap winders make an 846-grain lap with 20 ends up. The total lap weight is 30 pounds. New combing equipment installed included 24 Saco-Lowell Model



The mill No. 2 opening room has had 42 Saco-Lowell F-7 blending feeders installed in seven lines of six blenders each.

1954 combers. These combers have 15x36-inch cans which hold 25 pounds of 60-grain sliver. Drawing after combing consists of 18 frames of modernized Saco-Lowell 4-over-5 conventional drawing with 15x36-inch cans and spring top roll weighting.

The No. 2B card room, in mill No. 2, which was previously running on stock for muslin sheeting, has had combing equipment added and is now running percale sheeting, dress goods and other combed work. The card room has 18 Saco-Lowell Model 1956 combers with the same preparatory and finished drawing as in mill No. 4. It was necessary to rearrange and relight this card room before comber installation. The same type of preliminary work was done at the company's Riverside Division before the installation of 38 Saco-Lowell Model 1956 combers. The Riverside Division is currently running on combed and carded, box and cam work. In all cases comber additions were made to upgrade the fabric.

All in all, the company has almost doubled its combing capacity since 1954, the number of combers having increased from 86 to 170. The newest combers operate at 125 nips per minute and have four draw boxes with automatic top and bottom clearers.

Roving processes throughout the mills are being changed or have been changed from two to one process. In mill No. 1, 24 frames have been equipped with individual motor drives, Pneumastop and Parks-Cramer cleaners. These are J-3 drafting elements with 10x5 packages. Ten other frames in No. 2 mill have been equipped with Pneumastop, the FS-2 drafting changeover, and 12x6 packages. Long range plans call for all of the company's roving frames to be completely modernized. This is being done to reduce manufacturing costs and to improve quality. The mill has put Maier flyers on all roving frames to increase package weights. With the new flyer a 10x5-inch package holds 32 ounces of combed roving. The old package weight was 26 ounces.

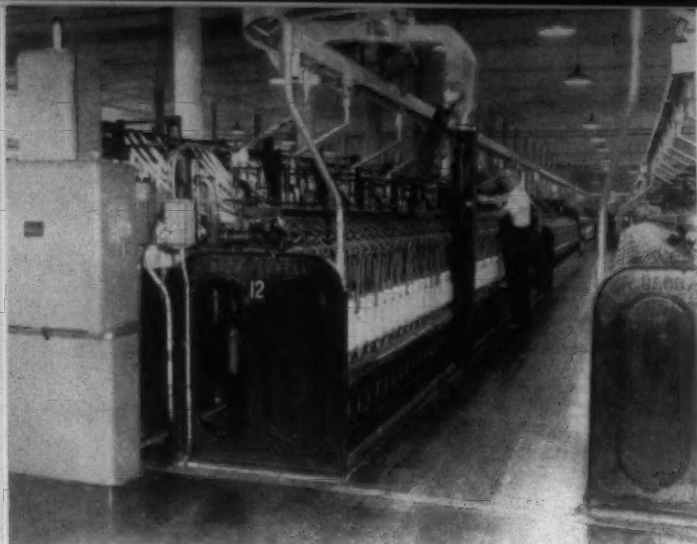
Spinning Modernization Objective

Dan River has a dual approach to improve its spinning, viz, modernizing existing frames and installing frames. This program has a five-pronged objective:

- (1) To improve and increase drafting
- (2) To improve cleaning by vacuum suction and blowing



Part of an installation of new Saco-Lowell combers in the mill No. 2 card room. Similar comber installations have been made in the Riverside Division.



Saco-Lowell J-3 roving frames in mill No. 2 are equipped with Pneumafil and Parks-Cramer frame cleaners. Other roving frames in the mill are equipped with the FS-2 drafting changover.

- (3) To reduce end breakage
- (4) To increase package weights
- (5) To reduce mechanical maintenance

The company's Riverside Division spinning room has 176 frames modernized with Saco-Lowell Duo-Roth Stay-Clean changeovers. Whitin supplied complete Super Draft

With Mr. Erwin . . .

Question: In your opinion, what will be the effect of mergers and acquisitions—such as your company's acquisition of Iselin-Jefferson and Burlington Industries' acquisition of Sidney Blumenthal & Co. on the textile industry?

Mr. Erwin: Generally, I believe that such acquisitions are beneficial to the industry, and will tend towards a more stable operation. As I emphasized in my recent remarks before the New York Society of Security Analysts, the growing leadership of the publicly-held textile companies, supported by the forward-looking diversified producers among the privately-held textile concerns, has been a healthy development. These companies have worked to diversify their product lines, have vigorously promoted their own branded products, have invested in research and development, and have developed the working capital resources necessary in today's business. These things are sound and progressive and essential to a stable industry.

Question: Will future textile corporation mergers be directed to building up larger textile operations or to diversification into non-related fields?

Mr. Erwin: With some notable exceptions, most of the acquisitions by textile companies in recent years have been aimed at growth and diversification within the textile industry. I think it is unlikely in the near future that there will be any broad-scale movement toward diversification in fields entirely unrelated to textiles.

Dan River Mills

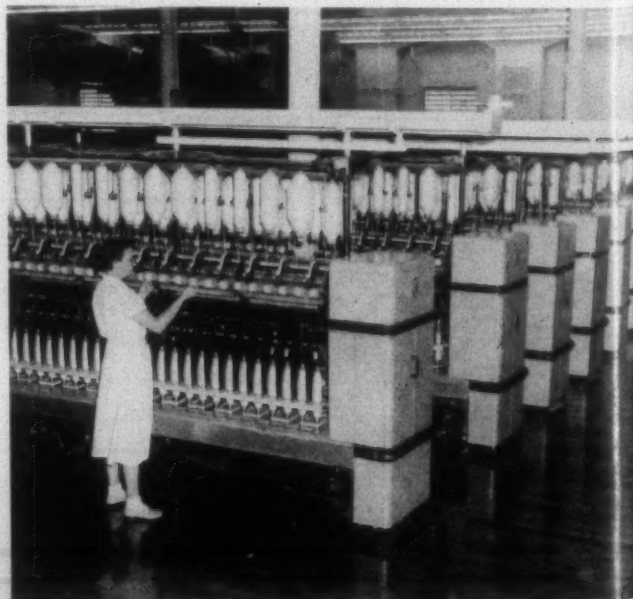
changeovers, including spindle, ring rail and drafting elements, for converting 50 twiststers into spinning frames at Riverside. Pneumafil ends-down collection systems, Pneumafil creels, Parks-Cramer frame cleaners and individual frame drives were installed on all of these modernized frames. About one-third of the company's total spinning room area has been air-conditioned and refrigerated using Bahnson Co. units. This air-conditioning includes spinning areas housing 45,056 spindles in the Riverside Division; 69,504 spindles in mill No. 4; and 42,624 spindles in mill No. 1.

In mill No. 2, some 92 frames comprising 26,208 spindles have been equipped with Whitin Super Draft changeovers. Sixty other frames have been modernized with Saco-Lowell Duo-Roth Stay-Clean changeovers. The Bahnson end recovery system is used on these frames. The frames have Draper Corp. top drive spindles and Parks-Cramer cleaners. The division's warp spinning has started up 88 Saco-Lowell Gwaltney spinning frames with Shaw drafting elements, Parks-Cramer cleaners and Pneumafil. The room is air-conditioned and refrigerated and has been relighted. The big Gwaltney package weighs 0.580 pounds per bobbin as compared to the 0.190 pounds per bobbin on the frames which were replaced.

The spinning facilities in No. 3 mill consist of 374 frames with 92,896 spindles. These frames are equipped with Clean-Align and Whitin Super Draft. No. 4 mill has 292 frames and 69,504 spindles equipped with Whitin Super Draft on warp and Stay-Clean Duo-Roth on filling. The room is air-conditioned and the frames have individual motor drives, Parks-Cramer frame cleaners and Bahnson Collecto-Vac systems.

Importance Of Cleaners

The incorporation of spinning frame cleaners and vacuum ends-down collectors is reported by the mill to have had a



Eighty-eight Saco-Lowell Gwaltney spinning frames, with Shaw drafting elements, are installed in the company's air-conditioned, refrigerated and relighted warp spinning room in mill No. 2.

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considerable effect on fabric quality. The mill uses the point system for grading its cloth and the average number of points per 100 yards were substantially reduced upon the completion of the cleaner and collector installation.

Mill No. 2 has installed two 288-spindle Barber-Colman Special C spoolers in order to provide winding for the Gwaltney spinning frames. These spoolers have pockets designed to take Gwaltney spinning frame packages. Conventional quillers have been replaced in mill No. 4 with 12-spindle Abbott radial quillers. Schlafhorst Autocopser quillers have been put in use at the Riverside Division and part of Division No. 2.

The warp preparation departments in the Riverside Division and Schoolfield Division No. 2, fancy goods mills, have had installations of Barber-Colman Draw-Tex drawing-in machines since 1947. However, both of these departments have had their facilities expanded and now operate 15 of the machines. It is the largest installation of this type of equipment in the world.

Weaving Equipment

Almost \$2 million has been spent by Dan River in its weaving departments since 1953. This money has been used to modernize older types of looms and installation of various specialty motions, and air changing equipment. In mill No. 1, weave room 1A, the Bahnson air change system has been installed as a continuation of a program begun in earlier years. The division is also replacing its 40-inch Draper E Model looms with 50-inch X-2 looms. Thus far, 261 of the new looms have been started up. Old sheeting looms are being replaced with the Draper Corp.'s new 90-inch XP-2 looms. The division has 206 of these looms in operation. In modernizing older looms the company has replaced all small beams with 26-inch beams. The loom lay-out has been rearranged and working con-



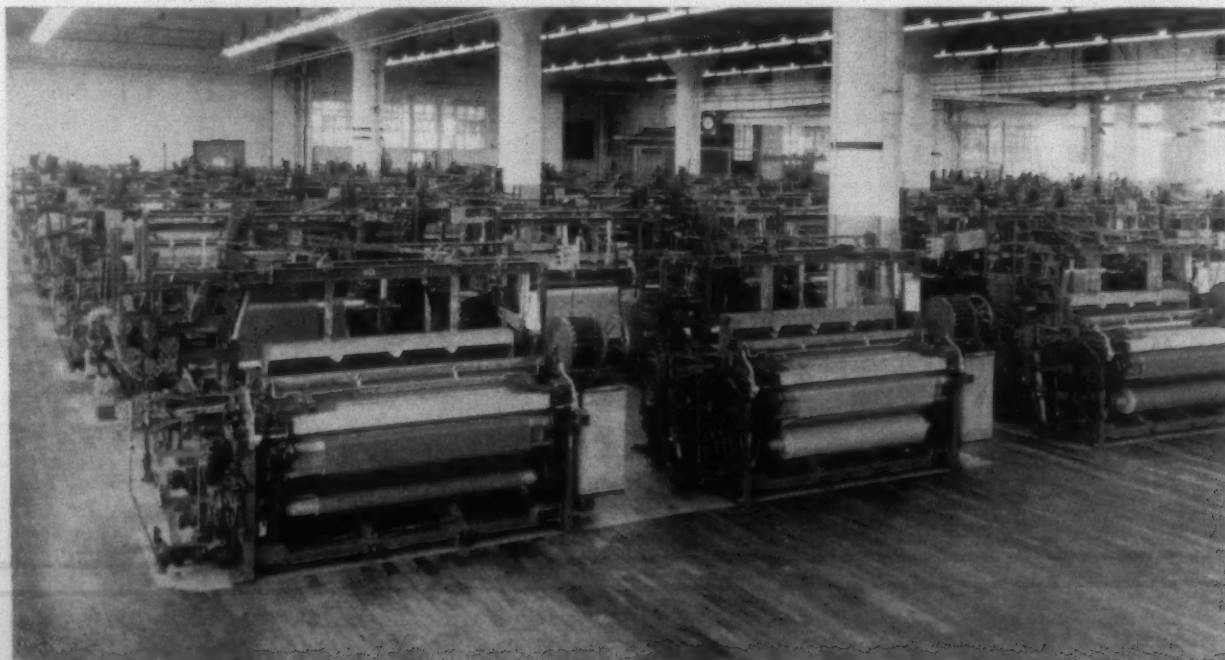
This group of Schlafhorst Autocopser quillers is located in the dressing room of mill No. 4.

ditions have been improved. Narrow looms have been replaced with looms capable of making the wider fabrics demanded by the company's customers.

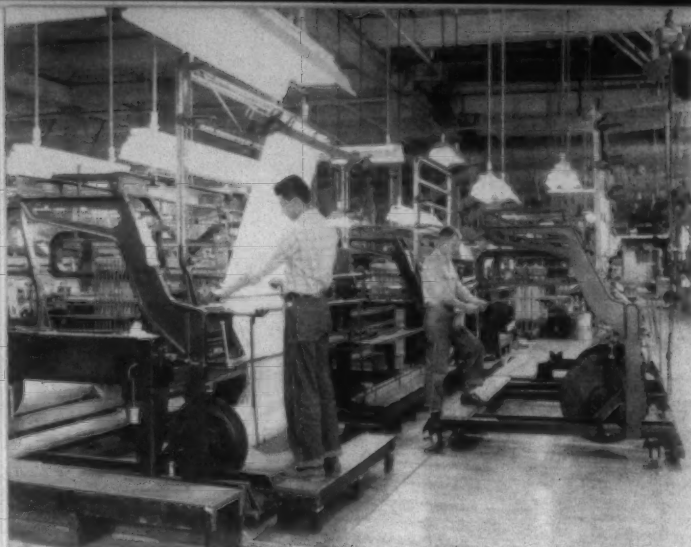
The company has purchased 150 Draper shuttleless looms for delivery in February, 1959. The looms will be 50 inches wide and will run on pillow case fabric. This width shuttleless loom is capable of running over 220 picks per minute. The filling is inserted by means of two steel tapes and is fed from two five to six-pound cones. Maintenance on the new looms is expected to be substantially less than with conventional looms.

Schoolfield Division No. 2 has installed 103 Crompton & Knowles 58-inch M.P. looms. The new looms replaced old gingham looms. A considerable amount of other improved weaving equipment has been put into use at the fancy goods mill. To make the division's output more diversified, seersucker and leno motions have been built onto existing looms.

The Riverside Division's cloth room has three new Curtis & Marble shearers. The cloth room in Division



Draper XD looms located in the No. 2 weave room.



This brace of Barber-Colman Draw-Tex drawing-in machines is part of the largest installation in the world of such equipment.

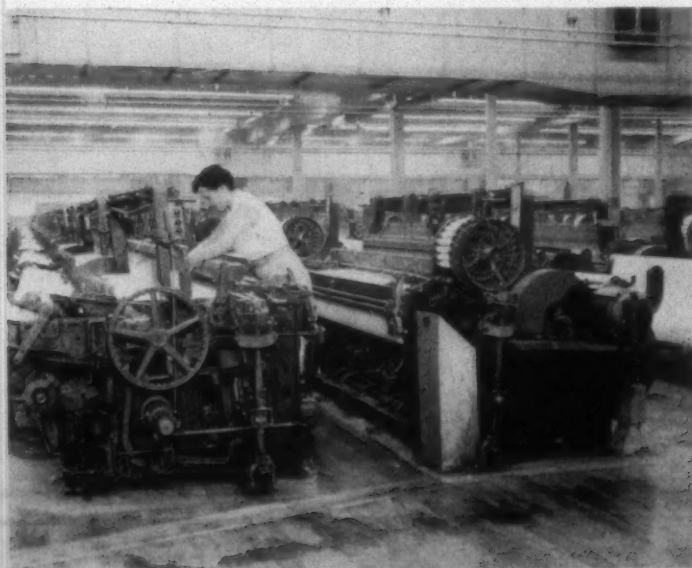
No. 1 has been relocated, rearranged and relighted. The company's power distribution system is in the process of being reworked to provide 60-cycle electrical current instead of the formerly used 25-cycle current. A start has been made toward refitting and modernization of all dressing rooms and toilets in the mills.

New Dyehouse

The company has virtually rebuilt its dyehouse in Division No. 2 and it now features a tile-walled drug mixing room. The well-lighted room, equipped with appropriate hooding over areas where volatile substances are handled, is kept spotlessly clean at all times. New Gaston County Dyeing Machine Co. combination beam and package dyeing machines have been installed in the dyehouse and also in a similar installation in the Riverside Division. In both divisions, beams are dried in new Theis drying machines which allow great savings in drying time.

Specialized Fixing

In addition to modernized machinery, the company em-

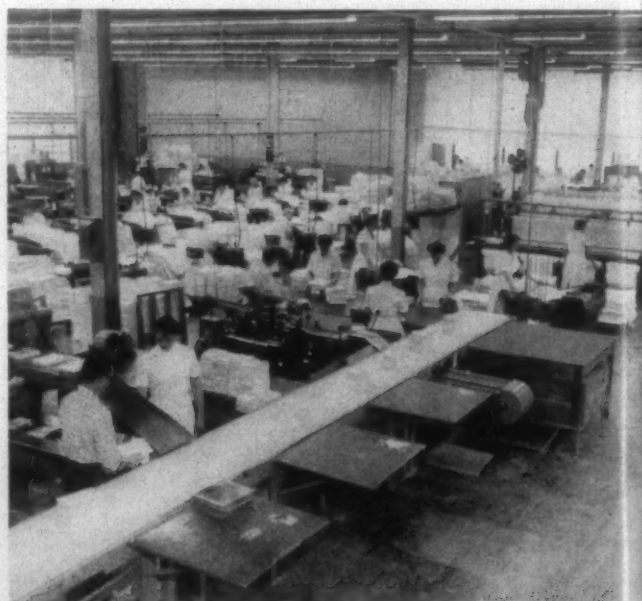


Draper 90-inch XP-2 sheeting looms located in the Division No. 1 weave room.

Dan River Mills

loys many modern methods. It was a pioneer in the use of specialized fixing as a measure of assuring good preventative maintenance. This specialized preventative maintenance goes on throughout all the greige mill operations but its application in weaving is especially interesting. In the system a fixer is assigned a specialty and works only on his specialty. Specialty classifications include such things as filling motion, let-off, take-up, shuttles, binder and leather, etc. Success of the system is predicated on having a weave room which is large enough and running reasonably stabilized production and reasonably plain work. For example, a 500-loom weave room would not be large enough for the system because each specialist would have to have three or four specialties. At that rate he would no longer be a specialist. On the other hand, a room which was large enough but ran great numbers of various styles and weights of goods would not be well suited for specialized loomfixing since the settings for various styles would be different.

Dan River does, however, to a degree do some specialized maintenance on its box looms although this is limited by the aforementioned factors. In general, box loom maintenance is handled on a loom-by-loom cycle in such manner that each loom is overhauled every 1,500 hours.



Pillow case put-in conveyor line showing pillow case mangle in the background and folding, banding and wrapping operations.

On this over-all basis, Dan River has localized its specialized preventative maintenance throughout all the greige mill operations with maintenance specialists placed under the supervision of maintenance superintendents. However, because manufacturing departmental and shift supervisors are held responsible for quality and efficiency, specialists, while not responsible directly to second hands, do report to the maintenance superintendent who, in turn, is directly under the supervision of the departmental superintendent. In this manner, departmental supervision maintains basic control over the preventative maintenance program.

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Quality Control

The company organized its quality control department some 14 years ago at a time when it was giving increasing emphasis to the sale of branded fabrics. Knowing that the Dan River name more and more would be attached to finished textile products and that these products would be advertised and promoted as such, the company felt that even stronger safeguards would be in order. The early days of the quality control department saw it do all yarn testing in the mills. But mill supervision became so quality conscious that these duties have been turned over to them.

The responsibility of the quality control operation now is to: (1) establish standards; (2) inspect greige and finished fabrics of sufficient quantity to insure maintenance of these standards; (3) keep management informed; (4) keep up-to-date on the quality of competitive fabrics; and (5) investigate complaints from customers.

The department tells the mill what the specifications are for a new fabric. It does not tell the mill what twist to run or what the skein strength of the yarn should be or any other operating information. Each week it inspects some 100,000 yards of greige fabric and 100,000 yards of finished fabric to see that the specifications are being met.

Point Cloth Grading System

The point system is used in grading all fabrics produced at the mills with the result that quality standards have become far more exacting. In addition, this system has influenced supervision to think in terms of average defects per 100 yards as well as per cent seconds. For the control of physical properties of fabrics, numerous tests such as tensile strength in warp and filling, abrasion resistance, colorfastness, crease resistance, etc., are run by the company's research department for quality control.



The new dyehouse in Division No. 2 is equipped with Gaston County Dyeing Machine Co. and Theis combination package and beam dye machines and a Theis drying machine (foreground). Note the instrumentation (at left) and mechanical beam handling (at right).

Safety

Whether due to modernized equipment or modernized management, or in part to both, the years 1953 to 1956 saw tremendous gains achieved in Dan River's safety record. During these years, there was a steady improvement in lost-time accident frequency rates with the company being awarded the National Safety Council's Award of Merit in 1954 and Award of Honor in 1956. In 1956 the company smashed all existing safety records as it achieved both the lowest total frequency rate—40.9—and the lowest lost-time frequency rate—1.2—in its history. In the president's annual letter to stockholders in 1956, W. J. Erwin said, this record "is an outstanding performance in any industry and is evidence of the fine co-operation and support of the employee group in our accident prevention program."

Research And Development

Quoting further from the president's report of 1956,

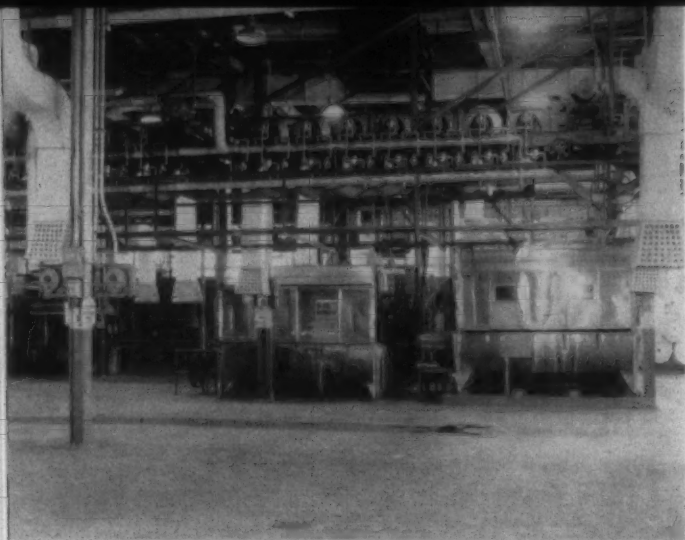
With Mr. Erwin . . .

Question: Is the textile industry making any progress in its efforts to lessen the impact of foreign imports on U. S. textile markets?

Mr. Erwin: Possibly the most discouraging facet of this complicated problem is the inability or unwillingness of our government to view it realistically, although I believe some modest progress was made in this direction as a result of the testimony presented by the industry earlier this year in connection with renewal of the Trade Agreements Act. I am hopeful that further progress will result from the work of the special Senate committee making a study of the textile industry, and that the report of this committee will make it crystal clear that foreign imports are a principal roadblock to the prosperity of the textile industry in the U. S.



A feature of the new dyehouse in Division No. 2 is this tile-walled drug mixing room. The room is kept spotlessly clean at all times and is equipped with hooding in appropriate areas.



This new bleaching range has been erected in Dan River's finishing plant. Note ceiling suspended dry cans in the background.

"One of the most striking developments in the modern history of textiles is what might properly be called a chemical revolution. This revolution in the chemistry of textiles has followed two avenues — one, the creation, improvement and refinement of new man-made fibers; and two, the development and perfection of chemical treatment for natural fibers, especially cotton. In the second field, the long-established Research Division at Dan River has pioneered, and has contributed in substantial measure to the resurgence of interest in cottons for apparel uses."

—The importance Dan River has placed on its research

With Mr. Erwin . . .

Question: In what areas do you think textile machinery manufacturers should work to provide the industry with the means of cutting costs and improving fabric quality?

Mr. Erwin: Textile machinery manufacturers have already done outstanding work in designing and building machinery that results in reduced costs and improved quality. Unfortunately, the industry has not been able to take full advantage of these developments since inadequate depreciation allowances and the limited earnings available for reinvestment have restricted the ability of the industry to purchase new machinery in the quantity and at the pace it considers desirable.

I think machinery manufacturers should continue their studies along the lines of developing equipment that will operate at higher speeds, handle larger packages, and provide more efficient cleaning. Shuttleless looms appear to offer some very attractive possibilities, and may prove an almost revolutionary development in the weaving operation. Equipment and techniques for material handling seem to require further development. Regardless of new machinery developments, however, a real breakthrough to substantially lower manufacturing costs will be conditioned by the availability of funds to finance new equipment, and this is likely to be a rather imposing problem.

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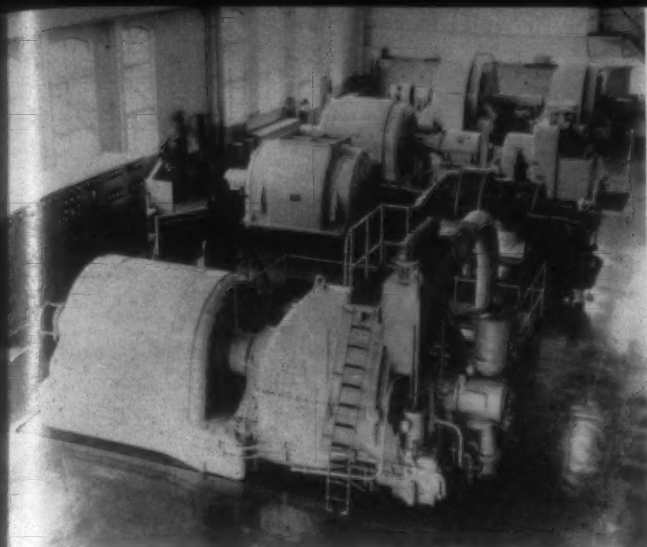
and development program has been tremendous. In 1955 more than 70% of the company's total cotton fabric production was treated with the Wrinkl-Shed® process, with the percentage running almost 100% in certain lines. Developed in 1955 and adapted for use in many fabric constructions in 1956, the Wrinkl-Shed with Dri-Don finish has been one of the most favorably received of all wash-and-wear fabric treatments. The most revolutionary application of the finish has been in men's shirtings. The introduction of all-cotton wash-and-wear shirtings sparked a lively demand for these fabrics and may possibly have revolutionized the traditional marketing pattern for dress shirts.

Dan River's research effort, with its wide range of activities, is directed at seven objectives: (1) development of new finishes, such as Wrinkl-Shed and Wrinkl-Shed with Dri-Don, to give added appeal and special use qualities to textile fabrics; (2) development of new styles and designs, plus new fabric constructions of cottons, synthetics and blends of natural and man-made fibers; (3) development of improved dyeing and finishing processes; (4) experimentation with dyestuffs to secure both improved colors and lower-cost dyeing; (5) development of better, lower cost chemicals for application in various processing operations and manufacture of chemicals; (6) testing of material purchased, yarns in process and finished fabrics to assure compliance with Dan River's high standards; and (7) technical assistance to the manufacturing divisions on dyeing and finishing problems. The division is aided in its work by a complete fiber-to-fabric pilot mill which permits experimentation under conditions comparable to large-scale production but without interference with normal mill operations.

Among the many physical testing procedures performed by the Research Division are crease resistance, tear strength, tensile strength, shrinkage, flex and flat abrasion, chlorine retention, blend checking, fiber identification, flammability tests, wash tests, soiling tests, mildew resistance and presence of odor tests. Dyed goods are tested for wash, perspiration, chlorine retention, crocking, lightfastness, etc. A new test devised by the division is a sewing test that determines the seam strength and amount of fiber breakage. The division has its own complete set of testing devices and all dyeing and finishing equipment, sample scale, with the exception of a sanforizer.

Purchasing Department

The company's reorganized purchasing department consists of a director of purchases, C. Miller Vernon, a purchasing agent and three assistant purchasing agents. The director of purchases reports directly to C. Eugene Rowe, the company's secretary-treasurer. Each purchasing agent is assigned a specific field in which to purchase materials. The director of purchases buys all dyes, major machinery, industrial fuels and negotiates contracts. Other purchasing agents handle: (1) opening through slashing, beam and package dyeing, corrugated cartons; chemicals; and sale of used machinery; (2) weaving, inspection, put-up and packaging; (3) heavy maintenance and construction materials, sale of salvage; and (4) mill supplies, transportation supplies,



Three 25-cycle turbo-generators are shown in the foreground of view of the company's power house. In the background is a 60-cycle frequency converter. Power is controlled by the duplex switchboard seen at the left.

lubricants, paint, office supplies and equipment, and domestic coal.

Aside from its regular purchasing duties, the department has worked out a highly effective value analysis program for determining the usefulness of new or improved products. The program is worked through the co-operation of the technical department of each manufacturing division and the Research Division. When a new product, such as a lug strap, is submitted to the purchasing agent, it is given to the technical superintendent of the division selected to test it. The new lug strap is then installed on the division's looms and a closely supervised performance test is run. Progress reports as well as a final report on the new product are made to the director of purchases.

Dan River's purchasing department plans to make use of the I.B.M. computer in maintaining adequate control over the 35,000 to 40,000 stocked items. The computer assists in this area by making known, at any single moment, the exact inventory of any single item. This makes it possible to initiate purchase orders on the basis of exact knowledge of the situation. The problem of preventing production bottlenecks due to lack of spare parts or overstocking certain items is staggering. It is made more apparent by the fact that Dan River, in many cases, stocks

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more spare parts of a certain type than does the manufacturer of the item.

The control of quality of purchased materials is another important function of the purchasing department. In many cases of complaint of defective or substandard supply parts, the purchasing agent accompanies the vendor's representative to the mill to investigate such complaints. In addition, each lot of dyestuff received by Dan River is checked by the Research Division before the lot is accepted. Skeins are dyed and compared to a standard for shade as well as light fading, gas fading, various wash and cleaning tests, perspiration, crocking, etc. The test procedure is so effective that most of the dye suppliers have inaugurated similar test series of their own, especially on dyes to be shipped to Dan River.

Modernized Mechandising

In 1954, Dan River Mills developed a new and unique advertising and promotion formula whose effectiveness was clearly demonstrated in sales of the 1955 Spring fabric lines. The unique feature of the program lies in simultaneous advertising planning and fabric styling for future seasons. Themed and integrated product lines were presented to the trades with a carefully planned advertising program. Representative fabrics were chosen to appear in full color advertisements in the national consumer advertising media. Additional support to the campaign was given through trade advertising, direct mail, field trips to leading retail department stores, promotional meetings, etc. Complete retail promotion and display kits were designed to stimulate effective participation on the part of Dan River's manufacturing and retail customers.

It is incontestable that the improved promotion methods had a hand in making 1955 sales and earnings the best since the war year of 1951. Production, shipments and orders taken on a yardage basis were greater than in any previous year of the company's history. Net sales amounted

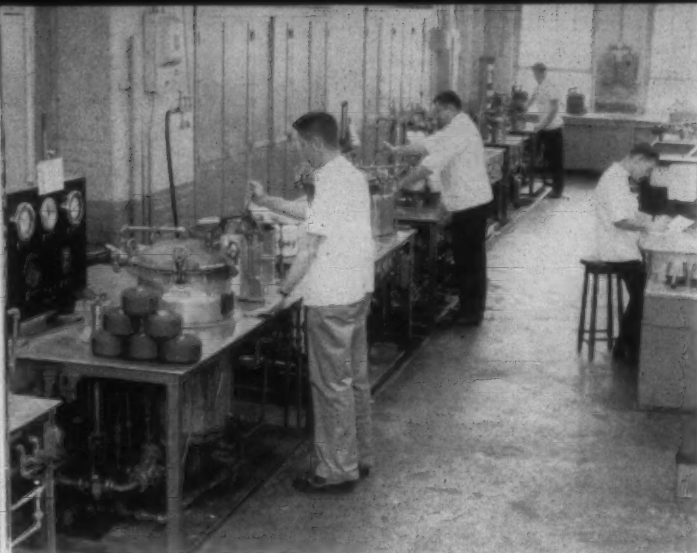
Future Modernization Plans

Cost: Over \$20 million in next six years.

- (1) Completion of spinning frame modernization.
- (2) Revamp all slashing.
- (3) Modernize all roving frames.
- (4) Completion of opening and picking modernization.
- (5) Replace all 40-inch cam looms with wider ones.
- (6) Modernize inspection tables and rooms.



This testing instrument room is located in the company's research division. Instruments shown are: (left to right foreground) Elmendorf tear tester; Stoll abrasion resistance tester; and Monsanto wrinkle recovery testers; (left to right background) two Scott trapezoid tear testers; and Sheffield Micronaire.



Research division laboratory-scale dyeing units. The division has laboratory-scale machines similar to every mill machine except a sanforizer.

to \$91,740,196 which represented a 12% increase over the \$81,775,838 net sales of 1954.

In 1955, Dan River expanded its aggressive advertising and promotion program. The "thematic advertising approach" was enlarged and merchandised with resulting improvement in the reception of the company's products at the apparel, manufacturing, retail and consumer level. Putting the lie to old theories that cotton textiles lose their identity before reaching the consumer is the fact that the company distributed, *on customer request*, approximately 65 million Dan River Wrinkl-Shed hang-tags during the year. Also during 1955 the company initiated a program of both four-color and black-and-white consumer advertising in a major foreign market, the Union of South Africa. The result of this effort was increased interest and identification of Dan River fabrics in that market.

The company used a spot campaign of television advertising, with considerable success, for the first time in 1956. Other advertising and promotion programs were further developed to support wider recognition and distribution of branded lines. Two big campaigns were the Sunshades Promotion, which ran in national magazines and Sunday supplements in full color during the Spring and Collector's Cottons to support back-to-school cotton apparel sales in the Fall, which ran in magazines and supplements and, in addition, on television.

The heavy emphasis in the 1957 advertising campaign was on the new wash-and-wear finish Wrinkl-Shed with Dri-Don and featured Spring and Fall promotions. The vigorous campaign resulted in the new finish becoming one of the best known wash-and-wear treatments in the U. S.

In his letter to the stockholders in 1957, President Erwin pointed out that the company's advertising efforts are prepared a full year in advance of the appearance of the fabric before the consumer. He also outlined the procedure of the merchandising of the company's advertising. "With the complete advertising campaign in hand, Dan River's sales personnel are fully equipped to present our campaign at the same time they are selling fabric lines to apparel manufacturers, almost nine months before the garments from these fabrics appear in retail stores.

"The first presentation of our advertising by sales per-

Dan River Mills

sonnel is backed up by advance presentation in trade publications of forthcoming national consumer advertising. This serves to establish brand and promotional leadership, not only with apparel manufacturers, but also with their customers—the retail markets.

"Additional support is provided in sales promotion activities and materials directed to the retail and chain store market levels. With the retail level the key to the movement of Dan River fabrics to the final consumer, retailers are stimulated to tie-in their own local advertising, display and promotional activities to capitalize on Dan River's color display and television advertising.

"The actual appearance of Dan River's consumer advertising, strengthened by these preliminary steps, then represents a full-scale promotion of our fabrics to the consumers in all markets across the country.

"At this critical point, stimulated by our own advertising and that of our customers and retailers, consumers must be able to identify products as manufactured by Dan River. Thus, the final step is the use of our hang-tags and labels as product identification on the racks and counters of the retail stores across the nation."

Dan River's Computer Center

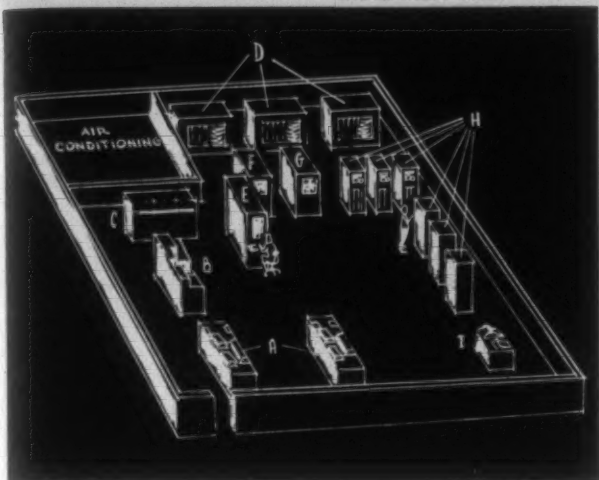
DAN River's complete electronic data processing center is made up of 17 separate machines, all interconnected to operate as a single system. The 650 Tape RAMAC System reads alphabetical and numerical data, compares accounting records, performs all arithmetic operations, makes decisions as to data being processed, writes out accounting reports and stores information for further use. All of these operations are controlled by a series of instructions fed into and stored by the machine.

A brief description of each piece of equipment, with relative locations shown in the accompanying drawing, is keyed to the alphabetical legend in the drawing.

A—Printer—The Printer is one of the input-output units of the system. It has the ability to read information into the system from punched cards, as well as print out reports. Input speed is 150 cards per minute. The output speed is 150 lines per minute with a line consisting of 120 characters. Thus, the machine can print 18,000 characters per minute. This machine also has counters so that it can accumulate information independently of the computer.

B—Read Punch Unit—This machine will put data into the 650 system or obtain information from it through the use of punched cards. Although much slower than the tape units, the read punch unit is still a high speed method of transferring information. It will process 200 tabulating cards per minute into the machine, each of which can contain 80 numbers or letters. This makes a total of 16,000 characters per minute which can be fed into the computer system by punched cards. The output can reach 100 cards or 8,000 characters per minute.

C—Power Unit—The power unit supplies power to the system. This unit converts AC current to DC. In addition,



Dan River's Computer Center—(A) printers; (B) read-punch unit; (C) power unit; (D) RAMAC disk storage; (E) console; (F) immediate access storage; (G) control unit; (H) tape units; and (I) inquiry station.

card language is translated to drum language and vice-versa. A number of checking circuits are included in the unit.

D—RAMAC Storage—The principal purpose of the RAMAC is to store information for very rapid access. This unit consists of 50 rotating disks, 24 inches in diameter, rotating at 1,250 r.p.m. One unit will hold six million digits of information and any of these can be reached in about $\frac{1}{2}$ second. Information is read from and written onto these disks by three access arms that move independently of each other. These units provide the system with tremendous flexibility—the ability to reach stored facts without having to search through unwanted information.

E—650 Console—The heart of the computer system is this console. It contains the calculating units, the control switches and the magnetic drum, a cylinder four inches in diameter and 16 inches in length. The magnetic drum revolves at a speed of 12,500 r.p.m. The surface of the rapidly revolving cylinder is divided into 2,000 small areas. In each division ten numbers or letters can be stored by patterns of magnetic spots. The operator's switches, buttons, and operating display lights are on the front of this unit.

The calculating unit performs its calculations and transfers data among the various other units with the speed of light. In spite of its speed, its accuracy and its ability to check itself the unit cannot think. It must have definite prearranged instructions telling it what to do. These instructions are stored in areas on the drum and they are followed over and over until a final instruction tells it to stop.

F—Immediate Access to Storage—The unit has a much more limited storage capacity than either the magnetic drum, RAMAC, or the magnetic tapes. It does have immediate accessibility, however, without time lapse, and it provides a working area for storage of the parts of a problem or program being worked on at that instant.

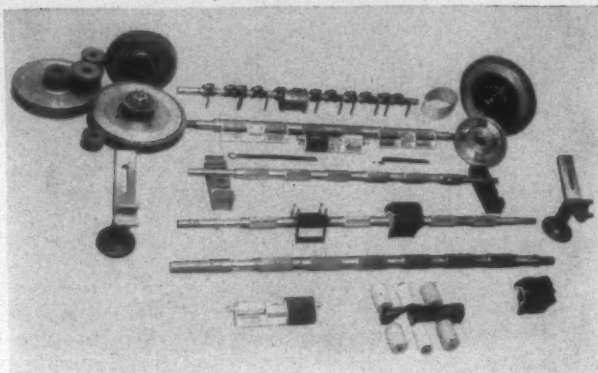
G—Control Unit—The control unit connects the tape drive units to the immediate access storage. It serves as the traffic control officer between the tape drives and RAMACs for reading and writing. It prevents more than one tape and/or RAMAC being processed at one time.

H—Tape Drive Unit—The Dan River computer has six tape drive units. The tape is $\frac{1}{2}$ -inch wide; 2,400 feet

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Investigate
DIXON'S CHANGEOVER PLAN:

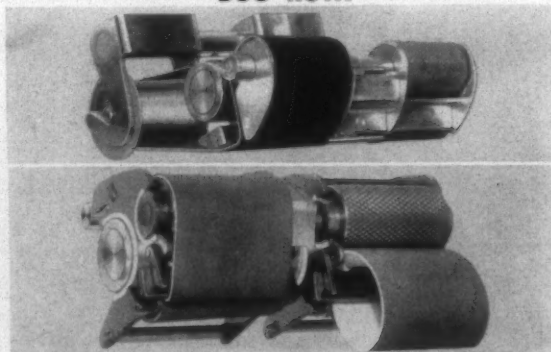
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the only manufacturer who can supply both
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Dixon rolls have RULON bearings — no lubrication required! Hence, no oil leakage, no down time for relubrication, no yarn contamination, no repairing. Save time, save money — get lower costing, longer lasting Dixon rolls for both Duo Roth and Casablancas spinning.

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Manufacturers of Drafting Devices since 1876

long; and holds approximately 4,500,000 characters on the surface. These characters take the form of magnetic spots. The tape units can read information into the system at the maximum rate of 15,000 characters per second. They can also write out information onto the tapes at the same time.

1—Inquiry Station—The inquiry station allows the operator to interrupt the program being processed to ask a

question of a system. When the system determines that a question has been asked, it stops its normal duties, gets the information from one of its storage media, assembles it into a format as dictated by its stored program and sends the answer back to the typewriter. The answer is typed at ten characters per second. The entire process takes about two seconds.

Opening, Picking, Carding & Spinning

Fall Meeting

Members Of A. T. O. E. Discuss

Question No. 1—Discuss your experience with U.N.O.C.-7 or U.N.O.X.-1 or other similar cotton fiber treatments.

Mill E: We apply 1½% U.N.O.X.-1 in the picker hoppers on our strict middling and strict low middling cotton. Our picker production is 370 pounds per hour and we run a 14.25-ounce lap. We have noted excessive loading on cards only on days when the outside humidity was unusually high. We have difficulty keeping our flats clean all the time. The treatment has resulted in reduced card room fly and although a reduction in ends-down on spinning is not significant, we had an increase in the break factor of our warp and filling of about 100 points. We have had some gum form on the top rolls of our slubbers and have noted lapping on these rolls.

Mill K: We apply U.N.O.X.-1 and Seyco to our stock in the opening room feeders. We use 1% of the additive in our part waste and strict low middling mixes. Our pickers run at 411 pounds per hour and make 16-ounce laps. When the per cent additive gets over one we get excessive loading on our cards. We get less fly in the card room using the additive. We have not noticed gum forming or lapping on rolls of our drawing, slubbers or spinning. Neither have we noticed a reduction in ends-down in spinning or increased strength of the yarn.

At the Fall meeting of the Alabama Textile Operating Executives, held October 25 in Langdon Hall on the campus of Alabama Polytechnic Institute, Auburn, members discussed special cotton fiber treatments used to increase yarn strength and reduce ends-down; changing flyers on roving frames to heavy package type with extra wrap on presser; large sliver cans; hardened point card clothing; open spinning frame creels; spinning package build and weight control methods; new spinning rings; and cycle spinning.

Card clothing
Cycle spinning
Large sliver cans
New spinning rings
Heavy package flyers
Cotton fiber treatments

Mill M: We use a 1% application of U.N.O.X.-1 and Texaco spray, fed in the opening room hoppers, in several mixes from low middling to strict low middling bright. Our pickers run at 380 pounds per hour and make a 16-ounce lap. We have noticed that cards load faster if over 1% additive is used. We get much less card room fly when using the additive. We have noticed no appreciable changes in gum forming on rolls, roll lapping, ends-down in spinning, or yarn strength.

Mill T: We spray our additive in the picker hopper and use 2 to 2½% in a low middling mix. Our pickers run 497 pounds per hour and make a 16-ounce lap. We have no trouble with cards loading and have less fly in the card room when using the additive. We have no trouble with gum forming on rolls or roll lapping and have had a reduction in ends-down.

Mill U: We apply Standard M-32 spray oil at the overflow hopper behind pickers. We run a blend of 65% strict low bright, 15% strict low, and 20% middling cotton. Our pickers produce 416 pounds per hour and make a 14-ounce lap. We have noticed some excessive loading on cards but have had a decrease in card fly. We also have some trouble with gum forming on rolls and roll lapping. We have had no change in our ends-down in spinning and very little change in our yarn strength.

Question No. 2—Discuss your experience with



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Superior Performance to match its name!

Years in the development and testing state . . . months in actual use by large mills under every conceivable operating condition—the new CARTER “Supreme” traveler is now ready.

The secret—a gleaming, satin-smooth, *plated* finish—increases traveler life over 1,000%, in some cases. One large mill, changing travelers every 12 hours, now runs the “Supreme” a *minimum of four*

weeks! It also completely solves the troublesome rust problem, and permits maximum control of neps.

You get longer, smoother running with far less down time . . . you save labor costs with fewer traveler changes . . . you get improved yarn quality and strength when you specify CARTER “Supreme”—a superior traveler in every sense of the word.

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DIVISION OF A.B. CARTER, INC. MANUFACTURERS OF THE
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changing flyers on roving frames to drop leg or heavy package type with extra wrapping on the presser foot.

(The table shows the details of what mills are doing to increase roving package weights. Comments by the mills concerning tension control, effect on spinning ends-down, necessity for changing roving twist, effect on yarn strength and effect on evenness of roving and yarn are given in following paragraphs.—Eds.)

Mill A: We have experienced no more trouble with new pressers than with conventional pressers. We can see no effect on spinning in any way. There is no necessity for increasing twist but we did change tension gear and bottom cone gear. Our package weight increase has been five ounces. We have found no effect on yarn evenness or strength.

Mill B: We have no trouble controlling tension throughout the doff and can find no effect on spinning ends-down or other spinning conditions caused by the extra wrap. We use the same twist in our roving but have changed the taper. Our weight was increased from 21 to 28 ounces. We find no effect on either yarn strength or evenness.

Mill F: We have no more trouble controlling tension than before changing and can see no significant effect on spinning ends-down or other spinning conditions. We increased our roving twist by 14% on 0.45 hank and 8% on 0.73 hank. We found it necessary to change our compound change gear, lay gear, tension gear and taper gear. Our package weight was increased by 35.9% on 0.45 hank and 17.9% on 0.73 hank. We found no significant change in yarn strength or evenness.

Mill G: We have no trouble with controlling tension throughout the doff and can see no effect on spinning ends-down or other spinning conditions caused by the additional wrap on the presser. We made no change in twist and no changes on the roving frame. Our package weight was increased by 27% and we have seen no effect on yarn evenness or strength.

Mill J: We have not been able to control the tension throughout the doff with the extra wrap on the presser foot. If the tension was right at the start of doff, it became too tight at approximately one-third to one-half full and either broke at the presser or on the bobbin. We could see no change on spinning ends-down and did not increase twist in the roving. We found that we had to move the starting point on the cone about one inch closer to the small end of the cone. We did not make any improvement in package weight.

Mill K: We have not been able to get complete control of tension throughout the doff. We could see no change in spinning ends-down and did not increase our roving twist. We made numerous changes in the roving frame gearing but did not succeed in gaining complete control over tension. We did get an 18% increase in package weight and could find no change in yarn strength or evenness.

Mill N: By changing the tension gear on one type of flyer, and tension and lay gear on another type of flyer, we are able to control tension throughout the doff. We do not see a necessity for changing roving twist. We increased our package weight by over five ounces.

Mill O: We experienced tension control trouble at the half doff and were unable to run the frame due to excessive ends-down at this stage. We could not clear up the situation even after making a tension gear change. Hard ends and ends-down in spinning increased. We did not increase our roving twist. We changed top cone gear, bottom lay gear and the bobbin build. These changes allowed us to make a roving package which weighs six ounces more than our regular package. We noted no improvement in yarn strength.

Mill P: We have tried putting an extra wrap on conventional flyers but did not have success in controlling tension. We did not have trouble controlling tension using the Reiter drop presser flyer. We have increased our 10x5 package weight from 28 to 32 ounces and have concluded that an extra wrap is not satisfactory except on a drop presser flyer.

Mill Q: We have had no trouble after adding twist to the roving and breaking in flyers and pressers. Our test results have indicated that no adverse effect is seen in spinning ends-down as a result of extra wrap. We made no other changes on the roving frame. We increased our package weight by 0.65 pounds (almost 10½ ounces) as a result of the extra wrap on the presser. Test results have shown no effect on yarn strength or uniformity.

Mill U: We maintain a constant humidity and have experienced no trouble controlling tension. We see no change in spinning ends-down and no reason to increase twist in roving. We changed tension and builder gears when going to the extra wrap. We have seen no change in yarn strength and evenness.

Question No. 3—Discuss your experience with large sliver cans.

Mill A: We use a 15x42-inch card sliver can which holds 26 pounds of sliver and handle them by sliding them along the floor. We have reduced the number of card tenders

Mill	Stock	Size	Drafting System	Bobbin Weight		Hank Roving	Make Flyer	Flyer Speed	F.R.S.
				Before	After				
A	Carded	9x4½	Whitin Super Draft	21	26	1.11 & 0.65	Saco-Lowell 9x4½	1,000	180-204
B	Combed	9x4½	Whitin Interdraft	21	28	1.05	Watson & Desmond 10x4¾	1,000	190
D	Carded	10x5	Whitin Interdraft	27	36	1.54	Maier Prima 10x5	1,000	150
F	Carded	12x6	Conventional 3 roll	2.45 #	3.33 #	0.45	Ideal 12x7	603	206
	Carded	11x5½	Whitin Interdraft	1.95 #	2.30 #	0.73	11x5½ with 12" bobbin	760	197
G	Carded	12x6½	Conventional 3 roll	52	66	0.60	Reiter 12x6½	700	208
J	Carded	11x5½	Whitin Interdraft	36	36	1.20	Maier Prima 11x5½	811	184
K	Carded	10x5	Whitin Interdraft	27	32	0.80	Ideal	930	200
N	Combed	10x5	Whitin Interdraft	1.90 #	2.25 #	1.25	5" Reiter and 5⅞" Maier	940	180
O	Carded	12x6	H. & B.	39	45	0.70		631	179
P	Carded	10x5	Whitin Interdraft	28	32	0.92-1.50	Reiter	820	195-130
	Carded	12x6½	Saco-Lowell J-3	50	60	0.92	Reiter	760	170
Q	Carded	12x6½	Conventional 3 roll	3.15 #	3.80 #	.60-.72-1.00	Whitin 12x6½		
							with drop presser	740	219-202-150
R	Carded	12x6½	Conventional 3 roll	55	61	0.65	Whitin & Reiter	686	192
S	Carded	12x6½	Conventional 3 roll	50	65	0.70	Whitin 12x6½	700	186
U	Carded	9x4½	Saco-Lowell FS-2	30	36	0.80-1.00-1.25	Ideal 10½x5	860	203



3 GOOD REASONS FOR BUYING

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ELM-TEX*

Spiral Flat Brushes for Carding

These new Saco-Lowell Brushes are another major step forward in improving card efficiency and costs. The strong yet flexible bristles keep flats clean and the brush lasts many times longer than conventional types. In addition, the assembly comes as a complete unit — thereby cutting installation time and labor to a minimum.

Start saving brush replacement and maintenance dollars — get all the facts about Saco-Lowell Spiral Flat Brushes. Phone, wire or write today and have this latest achievement of Saco-Lowell research working in your mill.

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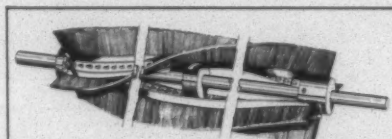
No wood cores to turn and polish, no screws to tighten, no need to check for uniformity of brush diameter.

2. FLATS ARE ALWAYS CLEAN

Bristles "do not take a set".

3. SLIVER QUALITY IS IMPROVED

Reduces neps and possibility of cloudy web.



The Elm-Tex* Spiral Flat Brush is constructed of stainless steel tabs securely fastened to a steel center shaft. The centered steel shaft assures uniform diameter of the brush throughout its length.



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OPENING, PICKING, CARDING & SPINNING

necessary for 201 cards from five to four. We see no disadvantages to the larger cans except that they are harder to handle.

Mill B: We use 16x42-inch drawing sliver cans which hold 39 pounds of stock. A small truck holding six cans is used to handle the cans. The cans may also be pushed, two at a time, along the floor. We have made considerable labor savings but since other changes were made at the same time we cannot say how much was attributable to cans alone. The only disadvantage we find is less room in roving frame creels.

Mill H: We use 15x36-inch cans on our drawing frames. The cans hold 23 pounds of sliver and are handled in a routine way. We installed high speed drawing when this change was made and do not have figures on the savings due to the larger can only. We have found no disadvantages to using the 15-inch can.

Mill L: We use 15x42-inch cans on our cards. The cans hold 25 pounds of stock and card tenders handle them by pushing two and dragging one. The large can has allowed us to eliminate 20% of the card tenders. We find no disadvantages for the large cans.

Mill M: We use 18x42-inch cans on our cards and 16x42-inch cans on our drawing. The card cans hold 33 pounds of stock and the drawing cans hold 32 pounds. We handle the large cans on trucks which hold four cans. A reduction in direct labor of 33% was allowed by the installation of large cans. We find that we have more breakbacks due to pinching of the sliver using large cans.

Mill O: We are running a trial on 22-inch diameter cans which hold 40 pounds of stock. The cans are built on casters and are handled by pushing or pulling. Due to the experimental nature of the cans we cannot say how much labor we will be able to save by their use. We have not noted an unusual number of breakbacks due to use of the large can as yet.

Mill Q: We are using 18x42-inch cans on our cards and 16x42-inch cans on our two-process drawing. Our card cans hold 41.70 pounds of stock while our breaker and finisher drawing cans hold 37.80 and 39.30 pounds, respectively. Due to other changes which were made at the same time, we cannot say how much labor savings the large cans have made. We have not detected any disadvantages in using the large cans. The large cans are handled on a floor conveyor.

Mill T: We run synthetic fibers only and use 18x42-inch cans which hold 33.5 pounds of stock. The cans are handled by sliding them along the floor. We have calculated a cost saving of \$0.0006 per pound as a result of using the large cans. We have noted no disadvantages to using the large cans.

Question No. 4—Discuss your experience with hardened point card clothing.

Mill D: We use hardened point card clothing on our doffers and cylinders. We have experienced a reduction in neps but have noticed an increase in foreign matter. We have no trouble with shedding at the card. We haven't had any smashes. The clothing has been running for five years and is still in good shape. We vacuum strip the clothing once every eight hours.

Mill M: We have hardened point wire on our doffers

and cylinders and after installation we noted a 25% reduction in neps. We have not had the clothing long enough to compare its life with that of regular clothing. We grind these cards every two months. We have not had any smashes so far.

Mill O: We tried hardened wire on the doffer of one card and noted that the sliver was of very poor quality. We experienced quite a bit of shedding and numerous chokes. We found that this wire was not as durable as our regular wire and was generally unsatisfactory.

Mill T: We use hardened wire on doffer and cylinder and have found that the sliver quality is good. We have no trouble with shedding and grind only every three months. We haven't had hardened wire long enough to compare its life with that of conventional wire. We believe that sliver quality is better on some synthetic fibers.

Question No. 5—Discuss your experience with the open-type spinning creel.

Mill B: We have had very satisfactory results with Eclipse and Hartford bobbin holders. We find both Pneumafil and Bahnson open-type creels to be very satisfactory. Our roving packages are 9x4½ and 12x6½ on 1.50 and 1.75 hank roving, respectively. Our roving twist multiples are 1.30 and 1.38 for these two counts. We use American MonoRail overhead cleaners, and Bahnson and Pneumafil ends-down collectors, and run a relative humidity of 45 to 50%. Our range of counts is 30s to 40s and we use conventional rolls with Armstrong Cork Co. covering.

Our ends-down per thousand spindle hours averages around 30 with about 5% due to top roll laps. Our roving breakbacks are negligible. We find that roving tails on an almost empty bobbin blow loose and cause a considerable percentage of ends-down. In many cases this is the difference between a job running and being torn up. Tails blowing loose often tear down three or four stands of ends. We have not found anything to eliminate this biggest single trouble in our spinning room.

Mill C: We use the Bahnson spring type bobbin holders for 11x5½ and 12x6 roving packages. Our roving counts are 1.12 and 1.15. Bahnson cross-jet cleaners and Bahnson Collect-O-Vac ends-down collection units are used on the spinning frames. We run 40% relative humidity, and 6.70 and 13.25s warp yarn and 8.00 to 16.50 filling. Our filling frames are equipped with Dayco 12C24 cots and our warp frames have 12SE24 cots.

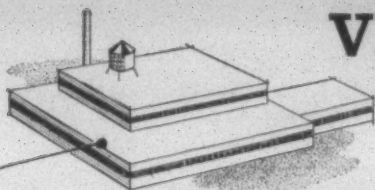
Our ends-down per thousand spindle hours is 41.59 with 5.66% caused by top roll laps and 5.66% caused by roving breaking back in the creel. Roving ends blowing loose on empty bobbins were not checked individually during ends-down tests but we know the problem is present.

Mill D: We have Pneumafil and Eclipse bobbin holders on our frames running 10x5 packages of 1.50 hank roving. Our frame cleaners are Bahnson and our ends-down collection system is made by Pneumafil. We run 45% relative humidity. Our yarn counts range from 4s to 24s and we use Armstrong 764 cots on our top rolls.

Our ends-down per thousand spindle hours averages between 35 and 40. Eight to 10% of these ends-down are caused by top roll laps. Ends breaking back in spinning creels runs from 2 to 10% of the total. Roving tails blowing loose on nearly empty roving bobbins account for approximately 2% of our ends-down.

Mill E: We use Pneumafil bobbin holders with rubber

VICTOR RING TRAVELER MOVES SOUTH



VICTOR RING TRAVELER manufacturing facilities have been transferred from Providence, R. I., to Easley, S. C., near Greenville. All departments are now in full production at the new location.

As announced in September, Victor's Southern office and stockroom was previously moved to White Horse Road, Greenville, S. C. All Victor office operations are now being conducted from this new location under the direction of Alfred L. Landau, Assistant General Manager of Saco-Lowell Replacement Parts Division.

Victor Traveler production is now logically centered in the area of greatest demand, permitting still better service to Southern mills. Victor service to New England will continue in full extent and efficiency.

All Victor customers will benefit from product and service improvements made possible by the expanded manufacturing space, new production equipment, and better facilities for quality control and research.

For complete information, call your nearest Victor Service Engineer.

FULL-SCALE VICTOR SERVICE TO NEW ENGLAND MILLS

Prompt deliveries from regional stocks

Victor's Eastern representatives will maintain unlimited service to all mills in the area. Delivery schedules to fit all needs will be met from full stocks conveniently located at Biddeford, Maine.



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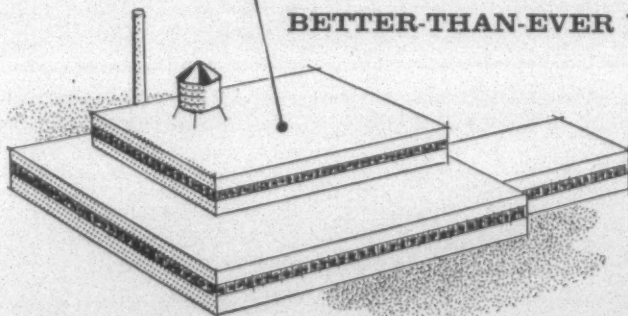
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Eastern Service Engineers

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OPENING, PICKING, CARDING & SPINNING

claws to hang our 10x5 and 12x6½ bobbins. We make 1.00 hank roving with a twist multiple of 1.45; 2.50 H.R. with T.M. of 1.51; and 0.60 H.R. with T.M. of 1.20. We have Bahnson overhead cleaners and the Pneumafil ends-down collection system. We run our relative humidity in the spinning room as close to 50% as we can. Our yarn numbers range from 3s to 30s. We use Armstrong 764 cots on spinning frame top rolls.

The ends-down per thousand hours on our yarns made with strict middling cotton is 35. We run 45 E.D.P.T.S.H. on strict low middling cotton yarns. About 5% of our ends-down result in top roll laps. Some 7% of the ends-down come from roving breaking back in the creel. Occasionally we have ends blowing loose on nearly empty roving bobbins causing adjacent ends to come down. We cannot give a percentage on this.

Mill G: We use Eclipse spring-type bobbin holders to hang our 12x6½ packages, weighing 66 ounces, of 1.24 twist multiple roving. Our two types of spinning frame cleaners are Parks-Cramer and American MonoRail. We use the Pneumafil ends-down collection system. Our yarn counts range from 10s to 31s and we hold the relative humidity in the spinning room to 50%. We use anti-friction top rolls.

Our spinning runs with from 25 to 35 ends-down per thousand hours. We estimate that 1% of our ends-down result in top roll laps. Approximately 1.8% of the ends-down are caused by roving break backs. We use a pre-determined yardage knock-off on our roving frames and have very little trouble from tails blowing loose on near empty roving bobbins and causing ends-down.

Mill I: We have had very good results with open-type creels. We have very little manual cleaning, no maintenance cost and good operating results. We run a 12x6½ roving package and use a 1.26 T.M. in the roving. Our bobbin holders are Eclipse spring-type. Our frames have Parks-Cramer overhead cleaners, Pneumafil ends-down collectors, and Climax top rolls. The spinning room relative humidity is held to 50-52%. Our yarn count is 32s.

About 5% of our 25-30 ends-down per thousand spindle hours result in top roll laps. We do not have breakbacks in spinning creels causing ends-down. We have noted very little trouble from ends blowing loose on near empty roving bobbins causing ends to come down.

Mill L: Our bobbin holders are made by the Hartford Machine Screw Co. We have a 12x7 roving package and our roving has a twist multiple of 1.35. Our frame cleaners are made by Parks-Cramer and our ends-down collectors are Spin-Sa-Vac. We run a relative humidity of 45-50% and our yarn numbers range from 6s to 19s.

Our ends-down per thousand spindle hours averages 25-30 with less than 1% causing top roll laps. The per cent of ends-down caused by roving breakbacks in spinning creels is very small. We do not have trouble with ends blowing loose on empty bobbins.

Mill N: Our 10x5 roving bobbins are hung in spinning creels on Hartford Machine Screw Co. bobbin holders. The twist multiple in the roving is 1.30. We use Parks-Cramer overhead cleaners, Pneumafil ends-down collection and 50% relative humidity in our spinning room. We run yarns from 21s to 35s and use conventional top rolls.

We have not made a comparison ends-down test and

cannot say what per cent of our ends-down result in top roll laps. We have, however, had more roving breakbacks in the creel due to our low roving twist multiple. We have had trouble with the tails on empty bobbins. We cover the end of roving when wrapping and start up fresh doffs at the middle of the bobbin on upward traverse. In spinning this keeps the tail covered until the last half of the last full traverse on the roving bobbin.

Mill O: We use Eclipse bobbin holders for our 12x6 packages of roving with 1.07 twist multiple. We do not have frame cleaners or ends-down collection units. We spin 3s to 18s synthetic yarns and run 55 to 60% relative humidity in the spinning room.

The ends-down per thousand spindle hours in our mill runs from 45 to 50. About 1.5% of these cause top roll lap ups. Another 3% are caused by roving breakbacks. We do not have trouble with loose ends of roving blowing free.

Mill Q: We hang our 12x6½ packages of 0.72 roving on Hartford bobbin holders. The roving has a 1.23 twist multiple. We use Parks-Cramer frame cleaners but do not have vacuum ends-down collectors. Our counts run between 7.3s to 27s. The relative humidity is controlled at 55%.

On 15s warp yarn we have 60 ends-down per thousand spindle hours. Our tests show that 1.35% of the ends-down cause top roll laps and 1.65% are caused by roving breakbacks.

Mill R: We have Casablanca and Hartford bobbin holders. Our package size is 12x6½ and our twist multiple is 1.19. We use American MonoRail frame cleaners, Parks-Cramer creels and Pneumafil ends-down collection. Our spinning room humidity is 48%. We run 8s to 18s filling and 12.5s to 20s warp. Our top rolls are anti-friction type.

Our ends-down per thousand spindle hours is 35 with approximately 1% resulting in top roll laps. We do not have any roving breakbacks in the creels. Our trouble from free roving ends on empty bobbins is negligible.

Mill T: We use Eclipse bobbin holders and 10x5 and 12x7 roving packages. Our frame cleaners are made by American MonoRail. We spin 8s yarn under 50% relative humidity and have Armstrong Accotex J-490 top rolls. Our ends-down per thousand spindle hours is 35 with 2% causing top roll laps and 1% caused by roving breakbacks. About 1% of our ends-down are caused by free ends on empty bobbins blowing loose.

Question No. 6—Please discuss methods used to keep continuous check on bobbin builds and package weights on warp and filling yarns.

Mill C: Section men check builds as they go over their jobs. Foreman and assistant foreman spot check builds. Laboratory and standards department periodically check package weight.

Mill D: We weigh ten bobbins of yarn every week off each number of yarn we are running. Also, when we put on a new number of yarn we weigh ten bobbins to see if they are up to the standard ounce/bobbin for the ring size and yarn count. If the package weight is substandard we check the bunch, stroke of traverse and lay gear to see what can be done to get the weight up to standard.

Mill E: On every doff when the build is not right the doffer holds the frame until the section man can fix it.

Mill F: Warp package weights are checked regularly once every month by weighing ten bobbins from each frame.

The frame running time is also checked. Filling packages are checked in the same manner. We have a gage to check diameter of filling bobbins due to variation in roving weights.

Mill G: Our standards department checks package weights once per month. Supervisors check daily for small builds.

Mill H: We have each fixer on filling to gage each frame at the beginning of the shift and make whatever adjustments are necessary on the build. Time study men check periodically on the weight of the filling package and the running time in the loom.

Our warp frames are doffed on schedules according to the running time of the frame. Any frame stopping out of line ahead of the doffer or not filling up in the correct running time is adjusted by the section man. Other checks are made by supervisors while patrolling their jobs and at the spoolers.

Mill I: Our fixers make scheduled checks on frames on all three shifts. Second hands make follow-up checks.

Mill J: The hank clocks are read each shift and a record is kept of the number of doffs made by each frame each shift. A standard number of hanks is required on all yarn numbers to produce the standard pounds on the bobbin. Some of our frames are doffed by the clock and the section men are required to adjust the frames so they will be running when the doffer gets to them. We measure our tapers, stroke and length of traverse at regular intervals and keep them set to mill standards.

Mill K: Spinning frames are divided between section men and each man checks one frame per day. He makes any necessary corrections and then turns in a bobbin off the frame to the overseer. The standards department checks weight on each type frame and yarn once each month. Any frame not in tolerance is corrected at once.

Mill L: We use a standard stroke, standard lay and pick for each yarn number. When a frame is changed, the first doff is checked for taper and build. On filling, we make a daily check on bunch, stroke and size of filling.

Mill O: We check the package weight and bobbin build of each warp and filling frame once per week. Our section men are given off-standard reports on frames not coming up to our standards.

Mill P: We have a total of 289 warp frames spinning yarns that range from 2.85s to 23s. All of the frames are doffed on a schedule and the running time is determined by previous experience and studies to determine the maximum amount of yarn of a given number, bobbin size and ring size that can be put on a bobbin. Tests were made to determine the proper lay and build with consideration given to subsequent winding operations.

We use one man to serve the builders of these frames and to act as a trouble shooter when changes are made that affect the build or package size. When doffing on schedule, there are times when maximum package size must be sacrificed to maintain efficient doffer job loads.

The methods of control of filling package size is somewhat different. We cannot schedule filling doffing. We have standard package sizes set up on results of tests which considered weave room requirements such as shuttle size and proper build to prevent sloughed filling. The section man making changes in count on a frame is required to fill out a form containing: (1) date of change; (2) shift;

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(3) time; (4) frame number; (5) total weight of doff; (6) yards on bunch; (7) shuttle size; and (8) name of section man. Our filling frames are equipped with Draper automatic builders. This builder bears the frame down and stops it automatically and there is little chance that the frame will be doffed short.

Mill S: Our frames are divided equally between section men on all shifts. Each section man is responsible for

seeing that his assigned frames are checked each week for build. In the event frames assigned to him are not building correctly he adjusts them. Frames not assigned to him, which are substandard, are also checked and the information passed on to the section man responsible for the frame. Scales are available for weighing bobbins to insure correct weight per bobbin.

Mill U: Section men check all frames every four weeks.

Warp Preparation & Weaving

The LOOMFIXER And His Job

He's an important man . . . His is an important job

THE power loom contains so many different parts and motions that its repair is often considered as more of an art than as a science. Old-time loomfixers relied on experience, experimentation and rule-of-thumb settings to keep the loom running. The newer high-speed looms cannot be maintained by these methods. They are precision-made machines and precise settings and adjustments are necessary in their maintenance.

The modern loomfixer must be able to correctly diagnose a loom's faults and adjust parts to close tolerances. In addition to the basic three wrenches, hammer and screw driver, he also needs to use a number of special tools and gages.

Most commonly used gages are the straight-edged, reed square, pick timing gage, pick cam gage, lay gage, feeler gage and front box plate gage. Many modifications of these gages are used to set and time other parts. For instance, the loomfixers in some mills use a modified front box plate gage to set more than 20 different parts of the loom.

Other important gages—but ones that are used less frequently—are the battery gages. This set includes a lay centering gage, lay height gage, hopper gage, disc gage,

By WILMER WESTBROOK

hopper placement gage and battery alignment gage. Many mills also have special gages to set the lugs, whip rolls, take-up rolls, to center the shuttle in the box, align the bobbin in the shuttle, time the harnesses and for other settings.

Since some tools and gages are not used often in routine loom repair and maintenance, one set of them for each weave room is sufficient. Such tools and gages should be placed in a central location and always returned when not in use. There is nothing quite as exasperating to a loomfixer as to have a loom stopped for repair and then have to hunt all over the room for tools or gages. Many thoughtless loomfixers will let an unused tool or gage lie under a loom or on a work bench all day without once thinking of the inconvenience it causes others.

A good system is to have an easily accessible storage space—the supply room is fine—for mill-owned gages, hammers and drills and have each loomfixer sign his name on a prepared form when he gets any of these items. If a tool or gage is not in its regular place, a glance at the last name on the sheet under the proper heading will show who is using it.

Part One

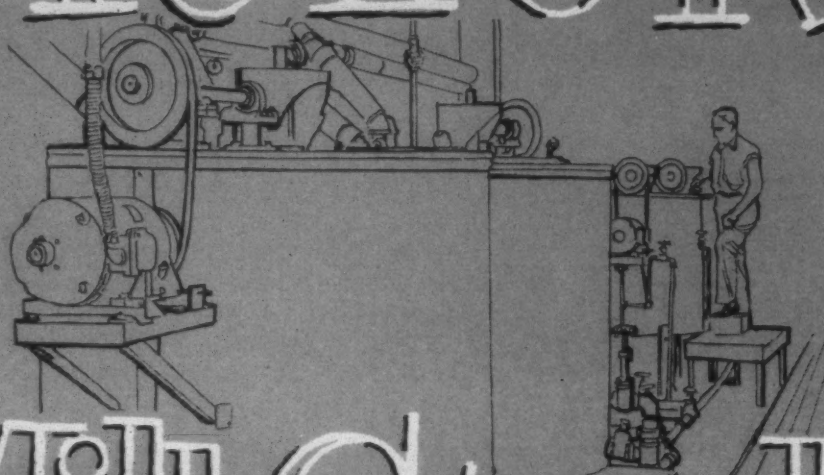
Modern looms require modern loomfixing. Many of the old hit-or-miss, rule-of-thumb practices of the past have no place in today's weave room. The fixer must know what to do and how to do it. He can't know everything because good loomfixers are learning all the time. It will be the purpose of this series not only to check him out on what he does know but to get him interested in what he doesn't know.

Unnecessary Adjusting

Since old-time loomfixers used hit-or-miss methods of loom repair, they were mostly self-taught. Usually promoted from the ranks of weavers, smash hands or warp men, they had a good idea of what a loom should do. But they often had widely divergent ideas on how to make them do it. As a result, there was a lot of unnecessary adjusting and readjusting of parts and sometimes a bit of controversy between the loomfixers and supervisors of the different shifts.

With the machined parts of the high-speed looms, each part can be set by gauge and no guesswork is required. But it is necessary for all the loomfixers to learn

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Fig. 1—Looms appear jammed in this weave room but each is carefully placed to conserve space and to be convenient for the weaver.

and use the same methods. It is still best to choose new loomfixers from among the men in the weave room who have had some experience on weaving and other jobs. Sometimes they have to unlearn some of the things they think they know about looms and forget some of their preconceived notions about the job.

First, the learner loomfixer should learn something about mechanics. He needs to know how levers, cams and gears work and some of the things that regulate their design and use.

Second, he should learn how to use the various tools and gages and how to take down and reassemble all the different loom parts and motions.

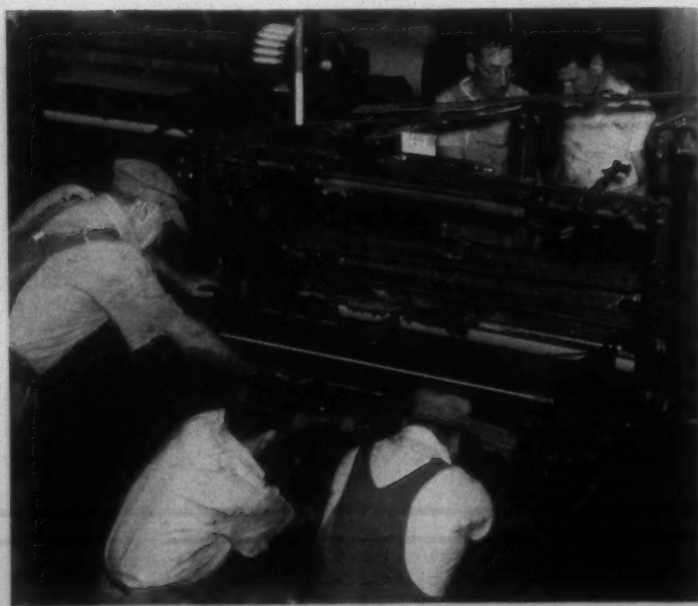


Fig. 2—Loomfixers should be taught to use the same methods and make all adjustments of loom parts to standard settings.

Third, he should learn what each part or motion does and how it operates it and how to keep it adjusted, lubricated and otherwise maintained for efficient operation with a minimum of repair.

Rudiments First

Only after he has mastered these rudiments can the loomfixer make correct diagnosis and actually begin to fix looms. It is very important that each loomfixer be taught in the same way and that he adopts and uses the standard settings for all loom parts. Refresher courses for loomfixers are invaluable in teaching new techniques or standardizing old methods. The vocational schools, jointly operated by the state boards of education and the mills, are excellent means of training new loomfixers or for retraining old ones.

Preventive maintenance is being used more and more in textile mills. Instead of waiting until a loom produces off-quality cloth or stops running, the modern loomfixer has a regular system of inspection and repairs. When gages are used to maintain standard settings, the loomfixer can check all of the principal parts of a loom in just a few minutes. Any deviation from the standard setting is a dead give-away to a part that is broken, worn out or has been adjusted wrong. Repairs and adjustments are greatly simplified and the loomfixers on different shifts are not always readjusting parts because they all set them alike.

These regular inspections also serve another purpose. All parts of the loom are kept in good condition and major overhaul jobs are seldom, if ever, needed. When the old-time loomfixer put a new shuttle in a loom he usually had about two days' work to get the loom in good condition. With preventive maintenance a loomfixer can put in a new shuttle in a few minutes and the only other parts needed at the time are new pickers.

Another important part of modern loomfixing is lubrica-

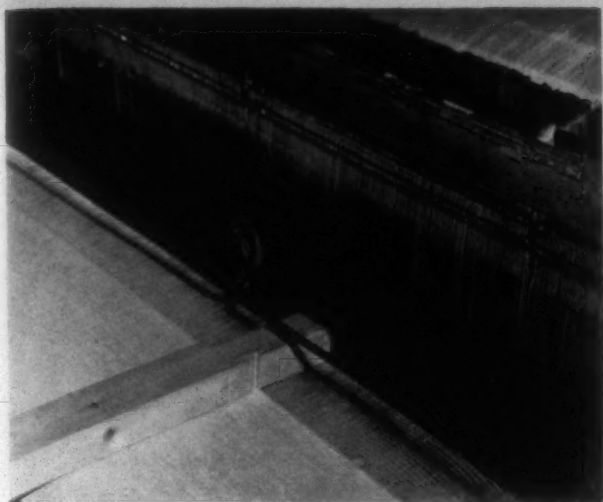


Fig. 3—Special gages can be used to get standard settings of many parts. Harnesses are timed, among other things, with this gage.

tion. The old looms had open bearings and cast parts and were lubricated with one kind of oil. High-speed looms require both oil and grease and certain parts need special lubricants. It cannot be expected that a lubricant used for a gear making 1,700 r.p.m. is also the best lubricant for a shaft that turns in a bearing once every four or five minutes.

The loomfixer should learn how often—and how much—to lubricate each part. Too-little or infrequent lubrication will cause parts to wear out or fail to operate properly. Too much lubricant is not only wasteful, but also will cause accumulations of lint and dirt and will sometimes get on the yarn or cloth and cause seconds.

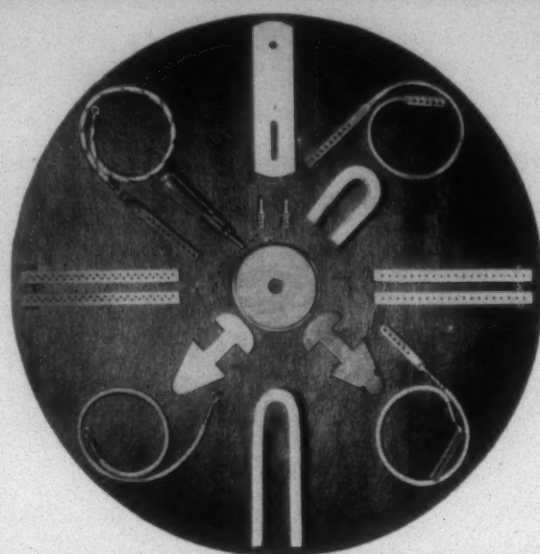
No Place For Trial-And-Error

The modern loomfixer needs to learn a lot about his job in addition to just replacing broken parts. There is no place in the present-day highly competitive weave room for the self-taught loomfixer who refuses to adopt modern methods and insists on using his own brand of trial-and-error fixing. The loomfixer must be able to go to a loom, diagnose its faults, do a minimum of repair and get the loom back into operation with as little downtime and expense as possible. He can't afford to have the same loom flagged again and again for the same fault or to have successive rolls of cloth with the same defects because he can't find the trouble and correct it.

There are many ways a loomfixer can improve himself. He can attend vocational classes, enroll in a correspondence course, read books and magazines on textiles, study manufacturers' instruction sheets and discuss the job with other loom fixers and supervisors. Loomfixing is like any other trade or profession—you can't stand still. The minute you stop learning and progressing you start sliding backward.

Hanes Begins Public Relations Program

The P. H. Hanes Knitting Co., Winston-Salem, N. C., has announced the beginning of a new program of public relations for the textile industry. The company has had prepared a number of billboard designs showing the place of textiles in the nation's economy. The billboards have a blank space for the sponsoring company's name. Hanes is also suggesting the use of a single symbol and slogan for the industry on a nationwide basis.



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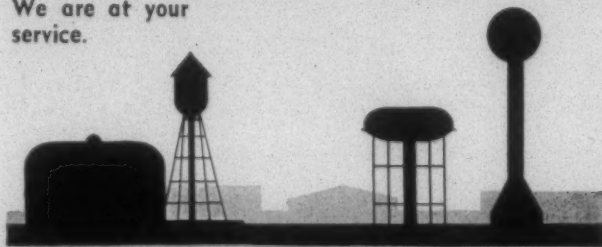
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A Shuttleless Loom From Sweden

By F. C. LIVINGSTONE

A pioneer installation of 40 looms without shuttles is in operation in Sweden, and one machine of the same type has been taken to England for tests at Manchester University. These looms, known as Maxbo, were invented by Max Paabo, and can be used to weave cloth up to 40 inches in width.

Filling on the Maxbo loom is blown through the shed by an air jet and is cut after each insertion. By eliminating shuttle and raceboard, the opportunity has been taken to re-design the warp shed line and so to increase the weaver's attention to the loom and also to reduce floor space. The filling is pre-wound onto a measuring drum, from which the air jet carries the thread through the shed.

One of the early problems, which has now been overcome, was to control the turbulence of the air jet, to insure that the pick of filling passed clearly through the shed without fouling the warp ends and causing entanglement. It is this problem that limits the maximum practicable cloth width to 40 inches. Considerable research has gone into improving the design of both the air nozzle which propels the yarn and the suction tube located at the opposite end of the shed.

There has been at least one previous attempt to introduce a shuttleless loom—this was shown at 1955 Brussels Exhibition on the Czechoslovakian Kovo (Swaty) looms, but with this there was the great limitation that the maximum width of cloth that could be woven was 15 inches, unless water was used to carry the filling.

The value and importance of the Maxbo loom is that cloth made from dry yarn can be used for weaves up to 40 inches wide. The tendency for the filling yarn to untwist is not particularly pronounced even at the beginning of the pick when there is a very high speed of insertion. By increasing the amount of twist in the yarn, up to a twist multiple of 5.00 it has been found possible to im-

prove both weaving conditions and the quality of the cloth.

Air consumption for picking is given as 13 cubic feet per minute per 13 pounds/inches square pressure. Loom speeds are 320 picks per minute for cloth between 35 and 40 inches wide, with running efficiencies between 90 and 95%. The maximum shed depth is about half-an-inch less than on a conventional automatic loom of similar reed-space, so the warp breakage rate is no greater than usual.

Filling breaks with the Maxbo loom are said to be exceptionally low, as the yarn is drawn from magazine creel cones at constant speed by the measuring roller. With 36 inches reed-space cloth woven at 320 picks per minute, the steady cone feed is 960 feet per minute. Unlike most other looms having stationary filling packages, the Maxbo loom does not cause sloughing off from the cone to break the yarn through choking the thread guide.

The Maxbo loom has been in the course of development over the past seven years and, in the current version, it can weave repeats of three and four picks, in addition to plain weave, shedding being controlled by positive cams running in oil.

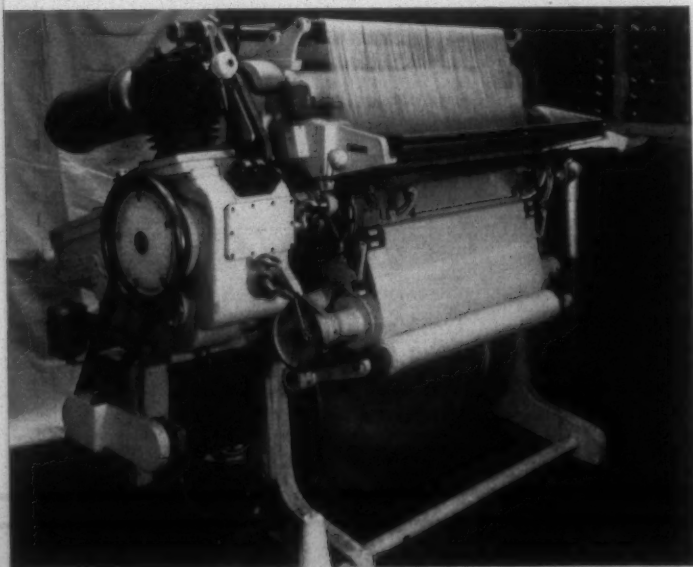
The loom has a special selvage motion of the continuous twisting type sometimes used on central selvage motions, two bobbins at either edge rotating continuously about each other to form sheds at the same time as the rest of the warp. The fringe which protrudes from the cloth edge is about one-eighth inch long, the actual selvage ends within the fabric occupying about one-eighth inch of cloth width.

The loom in its present stage of development is producing 36-inch fabric at 320 p.p.m. This compares with about 200 p.p.m. on an equivalent automatic shuttle loom of orthodox design. The method is not particularly efficient so far as power consumption is concerned, about one horsepower being required for filling insertion. It is anticipated, however, that planned improvements in the design of the pneumatic system will reduce power requirements. One important point in favor of the pneumatic method of filling insertion is that it is very much quieter than that of using shuttles.

The suction tube mounted on the opposite side of the warp to the picking nozzle serves to give a uniform tension to the filling every pick at beat-up, as well as to remove dust and loose fiber. Each loom is now equipped with its own air compressor, which proves to be much more efficient than supplying a number of looms from a centralized installation.

Push-button control is used for starting and stopping. Since shuttle-traps cannot occur, "bang-offs" are unknown. Disk brakes stop the loom immediately without jar. Another important factor in favor of the jet loom is that it is immaterial at what point of the weaving cycle the loom is started, since the force of the picking jet is unaffected. Two filling stop motions are fitted, as well as a normal mechanical or electrical warp stop motion.

Almost complete absence of noise in running is a very important point with the Maxbo loom. As conventional picking has been eliminated and insertion is by air, the noise is only pneumatic and not percussive.

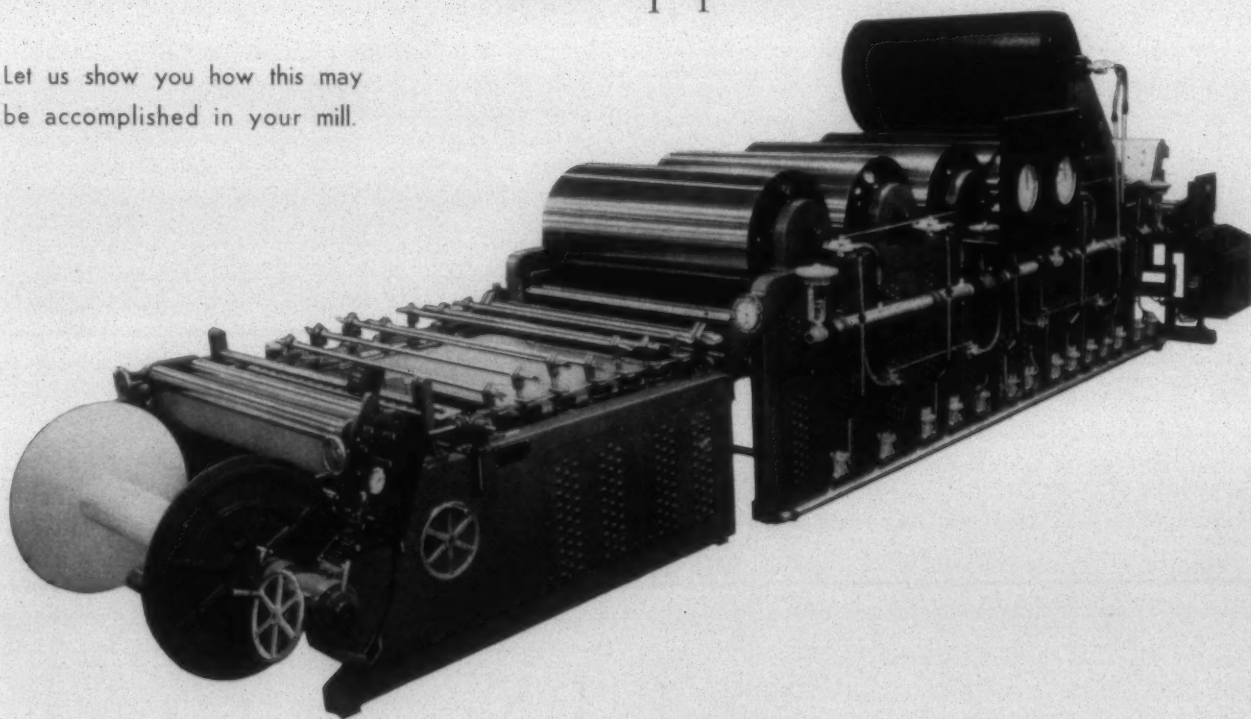


This Maxbo air jet (shuttleless) loom is now in operation in Sweden.

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Convection Air Application To Textile Drying

By W. L. METCALFE*

A vapor film forms on the surface of wet textile material and acts as a retarder to the evaporation of moisture. Read this evaluation, first presented at the Textile Symposium sponsored by the American Gas Association, of this and other factors involved which, if altered, could lead to the production of faster and more efficient drying rates.

THERE are three basic methods of applying heat to a material: radiation, conduction and convection. In drying conditions, all three usually exist in varying degrees.

Radiation is present any time a mass, having a lower temperature is exposed to a mass of higher temperature, providing the emitted rays have access to the former. Whenever a temperature gradient exists, conduction takes place within a mass or body, or on intimate contact with other bodies. Convection implies motion and results when a fluid conveys heat.

The most common medium for convection drying is air. For our purposes we will assume this air is not just any air but air that has predetermined temperature, a maintained humidity range and is applied by a controlled and carefully engineered principle.

The important consideration focuses on the removal of a film of moisture surrounding the material to be dried which envelops the surface in a blanket of vapor and acts as a barrier to water removal from the goods. A molecule of water is set in motion with application of heat. The greater the temperature the greater the force of motion. Any given molecule would shoot free of its initial location were it not for collision with other molecules, which causes a return in direction or a deflection in direction in any random pattern. The action is something like the pattern which takes place when a cue ball plows into a table of racked balls, except that there is freedom of motion in infinite directions instead of only the horizontal plane. The greater the number of balls on the pool table the more difficult it is for the cue ball to have freedom of motion without colliding with other balls.

Even so the molecules of water attempting to escape

from a material into the atmosphere find it difficult when a heavy concentration of other molecules block passage from the surface. This blanket of moisture molecules forms a vapor film. Our considerations will deal with methods of breaking or eliminating this vapor film.

Vapor Film

Perhaps the easiest way to illustrate what is meant by this vapor film is to think of the palm of your hand perspiring on a hot day. If you are standing in the sun you can see the beads of perspiration forming on the surface. The beads sparkle a second or so and disappear. Now blow very gently on your hand and note the difference in time between the two disappearances. Accelerated blowing dries the moistness so the phenomena can no longer be seen.

What is happening? God in His infinite wisdom has built into your body the finest cooling system in the world. The moisture in the blood is permitted to reach the surface of the skin through the pores and evaporates when cooling is needed. Actually, the moisture has trouble evaporating because there is a blanket of vapor retarding the flow of moisture particles into the surrounding atmosphere. When air motion breaks up this vapor layer, accelerated evaporation takes place.

For the sake of clarity we will differentiate between natural motion which is caused by temperature and mechanical or forced motion created by kinetic energy from some outside force. This bombarding of the surface with an outside force we will term *impingement*.

Air can be introduced to the textile material to be dried, cured or treated in a number of ways. The simplest and perhaps least satisfactory is merely to dump the air into the enclosure housing in which the material is to be dried. A slight refinement is to introduce the air into one end of a tunnel type housing (preferably counterflow to passage of goods) and extract from opposite end. Still better, in most cases, is a layout where the air is directed across the goods from the sides of the oven, either from one side or alternate sides.

Header Difficulties

In order to get more uniformity of distribution and increase impingement effect, perforated headers are arranged over, or over and under the material to direct the air at the sheet. Difficulties encountered are distribution of air in headers to give uniform outlet volumes and velocities at perforations. Baffles, guide vanes and design features are

*Mr. Metcalf is vice-president of sales for the J. O. Ross Engineering Division of Midland-Ross Corp., New York, N. Y. His remarks here are taken from a speech he made in September before a "Textile Processing Symposium" sponsored at Greensboro, N. C., by the American and the Southeastern Gas Associations.

used in an attempt to nullify this inherent weakness. Since the perforations are merely openings, the air escaping from the openings has a tendency to quickly expand and the impinging force is quickly dissipated. The spent air has to escape, so there is increasing interference with the air from the nozzles near the edges of the ducts being deflected before the air blast has a chance to reach the material.

To escape some of the undesirable features of any of the methods of convection air application mentioned so far, various nozzle designs have been developed. A nozzle may be considered an application terminal spout. The word "nozzle" is commonly used, however, to refer to the header cross duct in which the air is delivered to the material and the actual outlet is referred to as a slot, nipple, adjustable lip, hole or similar terminology. Continuous headers can be equipped with nozzle outlets and widely used designs of this type are common in the textile industry.

Cross duct nozzles have numerous shapes from round to square or rectangular. A very effective nozzle is the so-called Dubl-Flo, which is elliptical in shape and permits a double row of nipple outlets. Closer spacing than for round nozzles is possible.

It is of interest to observe how a nozzle works. Whether a continuous slot outlet or a round nipple outlet, in cross section the flow of air from the nozzle forms a slight vena-contracta, then spreads seven inches each side until the kinetic energy is spent except for turbulent flow. Maximum impinging effect is attained at from one to several diameters or slot widths away from the nozzle tip, depending on velocity, mass of air and nozzle characteristics. The striking force acts on the surface in a circular pattern from a round nipple and straight line pattern from slot. At the center of the impinged area is a point or line where there is no motion. In the case of the circular nipple outlet this point is known as the *stagnation point*. In the case of the continuous slot the line at which the air either travels to one side or the other is known as the *stagnation line*. This latter might be likened to the Continental Divide.

Scouring Effect

Scouring effect of the convection air is attained by the movement of air across and through the fabric. From the stagnation point, or line, the velocity parallel with the sheet immediately reaches a maximum speed, then decelerates until its force is spent and turbulent flow around the periphery permits the supply air to rise from the sheet to be recirculated or exhausted. In the process of striking the sheet and the flow along the surface, the convection air scours the surface of the vapor film which forms in the drying process.

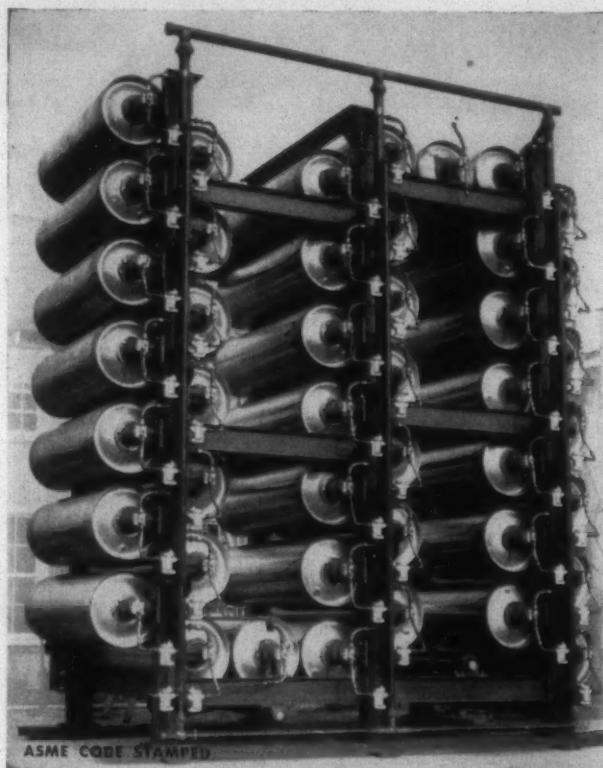
Good design dictates an impingement pattern with maximum coverage. Physical limitations, reasonable horsepower requirements, the nature of the product processed and other factors determine the nature and size of the air system. Nozzle outlets vary in size from a fraction of an inch to several inches in width or diameter. The end of the outlet spout may be as close as 1/2-inch from the surface to as much as perhaps two feet away. Outlet velocities may vary from say, 1,000 f.p.m. to as much as 20,000 f.p.m.

A method currently used on tissue paper machines and soon to be applied to a textile paint drying installation develops ways and means of producing and processing

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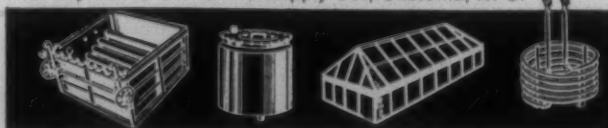
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finished materials at unheard of speeds by today's standards. This drying process is known as *infinite impingement*. In the process, a surface flow is created over the entire area of the cloth that duplicates the scouring effect immediately following the stagnation line or point from nozzle impingement. To accomplish this effect the cloth to be processed is confined in a controlled air space with air introduction in such ways as to produce a parallel flow

usually counter-current to the material. Skin velocities are in the neighborhood of 10,000 f.p.m. at the surface.

Gas, particularly natural gas, is a very desirable heating medium for convection air drying. Many times gas can be used on direct fired installations when no other heating method will do the job. For high temperature drying gas is by far the most popular heat source among oven and dryer manufacturers.

Maintenance, Engineering & Handling

Organized Plant Lubrication

Part III

By R. K. GOULD
Research & Technical Dept.
The Texas Company
Beacon, New York

APPPLICATION of lubricants is a subject in itself, a full discussion of which is beyond the scope of this article. Nevertheless, it is one of the most important features of any successful lubrication program. The best lubricant in the world is of no value until it is applied properly to the bearings, gears or other surfaces requiring lubrication.

For the older type machines, manual methods of application, although far from ideal, can be used satisfactorily if the number of points to be lubricated are few and the frequency of application is not particularly critical. The design of modern machines practically precludes the use of these antique methods of application. Not only are the bearings in today's machines far more numerous, but they are also precision-built to operate under much more severe conditions. Controlled lubricant application—the right amount at the right time—is essential. It is just too much to expect even the most conscientious oiler to locate every point that is to be lubricated and see that it is lubricated properly. The application of lubricants to modern equipment should be as independent as possible of the human element.

Consequently, wherever possible, consideration should be given to the use of mechanical means of applying lubricants. There are many varieties and types of equipment available, ranging from devices to lubricate a single bearing to fully automatic central systems capable of lubricating all of the machines in the plant. The benefits to be realized from controlled lubrication are many and have been well established. Some of them are outlined as follows:

Lower Operating Costs—One of the big advantages of the use of modern methods of applying lubricants is the reduced cost of application. Years ago it was economical to lubricate machinery by manual methods. Today labor is not

cheap. In one plant where manual lubrication was still being used, it was estimated that it was costing \$4.00 in labor to apply \$1.00 worth of lubricant.

Less Downtime—In plants which still rely on manual methods of applying lubricants, much valuable time is lost because of the necessity of stopping machines to apply the lubricant. As an example, in an automotive plant it was found that it required an oiler 18 minutes to lubricate a cylinder block boring machine. Multiply this by the number of machines in a plant and the number of lubrication intervals per day, and it is readily apparent that the amount of expensive "time-out" for lubrication could be appreciable.

The Right Amount At The Right Time—How much lubricant and how often? The answer to this, of course, depends on the size and type of bearing, the load and speed and the environment. For each bearing and set of operating conditions, there will be an optimum quantity of lubricant that should be applied and an optimum lubrication interval. For example, a large high-speed drive shaft may require a shot of oil every few minutes. A small bearing may need only a drop of oil every hour or so. Outmoded hand lubrication methods invariably will produce a feast or a famine, either one of which can produce some very unpleasant, if not disastrous, consequences.

No Guess Work—It is not uncommon for a complex piece of machinery to have over 200 bearings. Experience has shown that it is impossible for any crew of oilers, regardless of how conscientious they may be, to lubricate these bearings manually with any degree of accuracy. Here the old adage, "Out of sight out of mind" is working overtime. With modern methods of application, however, all bearings, not just the obvious ones, are lubricated.

No Inaccessible Bearings—In addition to bearings hidden from view, many bearings or other parts to be lubricated are practically inaccessible to manual lubrication. In order to lubricate these points, the equipment must be partially dismantled, which not only is a nuisance, but also takes up valuable time. With modern methods of application there are no inaccessible bearings.

No Contamination—A good portion of equipment maintenance costs can be attributed directly to a contaminated lubricant. Manual methods of application invite con-

tamination. Modern methods of application practically preclude it.

Promotes Safety—All plants are becoming more safety conscious. It is generally forbidden to lubricate a machine manually while it is in operation. Frequently the rules are overlooked and in these cases lubricant application is a definite hazard. Even when the machines are stopped, it may be necessary for the oilers to climb ladders, sometimes at dizzy heights, to lubricate a bearing. With manual methods of application the lubricant is not always confined to the bearings. The machine surfaces are usually covered and the floors become oil soaked, presenting another hazard. Modern methods eliminate these hazards.

These are some of the obvious benefits to be realized by controlled application of lubricants, all of which will contribute handsomely toward reduced costs and increased production.

Preventive Maintenance—Preventive maintenance, properly handled, must be a part of any sound lubrication program. Although the lesson has been learned the hard way, experience has proven that in the long run it pays to take care of equipment on the job. A program of preventive maintenance, well planned and properly executed, will pay for itself over and over again. For example, it is much cheaper to keep a bearing adjusted than it is to buy new bearings, shafts and gears that become damaged when unadjusted bearings fail. Major breakdowns, lost time and high operating costs can be kept to a minimum by keeping parts lubricated, tightened and adjusted. Furthermore an operator whose equipment is always in good condition is very apt to be a happy, satisfied employee.

Systematic Hand Oiling

Not only do the arguments for organized plant lubrication appear reasonable but also they are firmly supported by actual experience. Evidence continues to accumulate, all of which testifies to the overwhelming success of planned lubrication wherever it has been tried.

For example, one plant was experiencing lubrication problems due to a combination of the complexity of the equipment and certain seniority rules. An oiler was in the lowest job classification and received the lowest rate of pay. Any new, inexperienced employee was assigned to this job. As he acquired experience and seniority, he would be transferred to a job of higher classification. This meant that there was always a rapid turnover among the oilers and furthermore that they were always the least experienced of the plant personnel. There was little opportunity to train individuals for the important job of lubrication.

As an example of the type of equipment that had to be lubricated, a certain machine required one type of lubricant in 22 places daily, another type in one place daily, a third type in six places weekly, a fourth type in one place weekly, a fifth type in one place weekly, and a sixth type in six places semi-annually. Since there were about 250 machines in the plant, it is apparent that, under the circumstances, there was a real problem in applying the right lubricant to the right place at the right time. Several years ago, a lubrication program was initiated which was designed to improve the situation with respect to application of lubricants and to minimize the chances of error.

The heart of the program is a code system for identifying each lubricant and each lubrication point on a machine where it was to be applied. Briefly, each lubricant is as-

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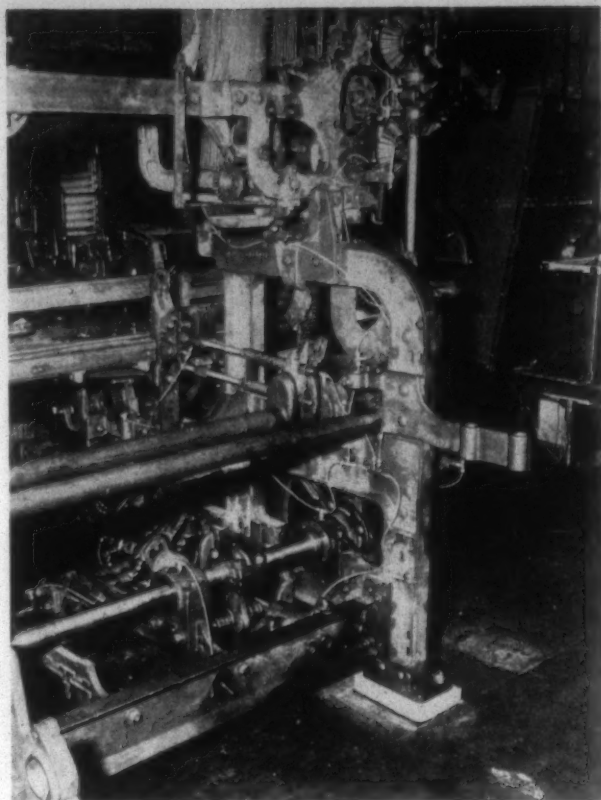
signed a code which is simply a colored symbol, such as a red cross, a yellow square, a green triangle, etc. This assigned code is painted on top of a drum of lubricant upon receipt from the supplier and thereafter the lubricant is identified by its code rather than its name. Any containers used for intermediate transfer of the lubricant from the drum to the machine also bear the code designation. Thus, a given container is used for only one type of lubricant. Each point to be lubricated on an individual machine is identified by the symbol representing the lubricant to be used. Finally, a card inserted in a plastic envelope attached to each machine specifies the different lubricants, by symbol, required for that machine, also the number of points where each lubricant is to be applied and whether the frequency of application is daily, semi-weekly or semi-annually. Duplicate sets of cards are kept in the office for use in setting up the daily lubrication schedules for the oilers.

Check Sheet

At the beginning of the day, each oiler is given a check sheet which identifies the machines he is to service. The sheet also indicates whether points on any of the machines requiring semi-weekly, weekly or semi-annual lubrication are to be serviced that day. The oiler fills the containers on his cart with lubricant from the drums which are on a special rack in the storeroom, matching the symbol on the container with that on the drum. Before servicing a machine, he consults the attached card to determine the daily lubrication requirements.



These spinning frames running synthetic decorative yarns each have Lincoln Engineering Co.'s Centro-matic power drive lubricant pumps mounted on the foot-end. The pumps receive their lubricant supply direct from drums through pressurized supply lines.



Lubricant is delivered to 50 bearing points on this C & K W-3 loom through nylon tubing which, in turn, is fed from a one-inch pressurized oil supply line. The points of lubrication include plain bearings, roller bearings and open gears.

Suppose, for example, under the column headed "daily" there is a red cross with the number 8 after it and a green triangle followed by the number 3. This means that there are eight lubrication points that require the lubricant identified by the red cross and three points for the lubricant with the green triangle. Since the actual points on the machine are also identified by the corresponding code, the oiler merely has to locate the various points, eight red crosses and three green triangles, and lubricate them accordingly. When he has completed servicing all of the points requiring daily lubrication, the oiler checks his schedule sheet to determine if elements other than the daily requirements are to be serviced that day. If the schedule shows that the weekly points are also to be lubricated, he again consults the card attached to the machine and looks under the column headed "weekly" to determine the lubricants required and the number of points to be lubricated.

As the lubrication of each machine is completed, the oiler checks it off on his schedule sheet. When he has serviced all of the machines listed, he signs the sheet and turns it in. Although this system is not entirely foolproof since it does rely on the human element to an appreciable extent, it has eliminated practically all of the potential sources of errors except those due to carelessness. Furthermore, it minimizes the need for experience and permits satisfactory application of lubricants by beginners.

Automatic Loom Oiling

The Portland (Ore.) Woolen Mills is installing Alemite Accumite automatic centralized lubrication on its 80 Cromton & Knowles 92-inch W-3 looms. This installation comes after the company had successfully installed the centralized

system on its spinning frames approximately two years ago. The investment is reported to be "paying-off."

Fifty bearing points are oiled automatically on the company's looms. Lubricant is fed to these points through nylon tubing. C. F. Wagner, Portland engineer, says the new system requires about eight hours to install on a loom and he uses his own maintenance people to do the work. Each loom requires 50 Accumite valves and an inlet valve from the pressurized main oil line. The points of lubrication include plain bearings, roller bearings and open gears.

They are oiled with a controlled amount of lubricant at pre-set intervals. The one-inch oil supply line which serves the spinning room will also serve the weaving department.

"If you depend on manual oiling, looms just don't get oiled," Wagner said. "The centralized systems on some of our newer looms still left many points to be hand-oiled and it was a continuous maintenance job to keep these partial systems functioning. They required hand-filling and actuation by the operator, so they were neglected just as badly as looms completely hand-oiled had been."

Promotions, Resignations, Honors,
Transfers, Appointments, Elections,
Civic and Associational Activities

PERSONAL NEWS



Robert M. McCrary

Robert M. McCrary, formerly superintendent of Carolinian Mills, High Shoals, N. C., has been named president and treasurer of Hart Cotton Mills, Tarboro, N. C., succeeding Marcus Carter, who has resigned. A native of Pendleton, S. C., McCrary has been active in the textile industry since graduation from Clemson College in 1935. He has been associated with Gossett Mills at Anderson and Williamston, S. C.; with Martinsville (Va.) Cotton Mill Co.; and Laurens (S. C.) Mills. He was named superintendent of Carolinian Mills in 1947. Long active with the Southern Textile Association, he is currently serving as second vice-president of the group. Hart Cotton Mills operates 60,000 spindles and some 1,300 looms on broadcloths and print cloths. Succeeding McCrary as superintendent of Carolinian Mills is J. H. Godfrey, formerly assistant superintendent of F. W. Poe Mfg. Co., Greenville, S. C.

Albert L. Butler Sr. has retired from Chatham Mfg. Co., Elkin, N. C. Butler will continue to serve as chairman of the board of directors. He has served the company at various times as president, vice-president and secretary. He joined the company in 1914 and was named president in 1945.

Joseph P. Hughes has been named manager of the Eno Plant of Cone Mills Corp. in Hillsboro, N. C., succeeding Sydney Green, who has retired. Hughes has been superintendent of the plant since 1936. Before that he was assistant superintendent for six years. Hughes joined the plant in 1926. He is a graduate of North Carolina State College and a former member of the board of governors of the Southern Textile

Association. . . Sydney Green, a native of Lancashire, England, was superintendent of Eno Cotton Mills from 1933 until 1945 when he was named a vice-president. In 1951, when Eno was incorporated with Cone Mills, he was named plant manager.

D. C. Chandler has been named an overseer at Glenn Mills, Lincolnton, N. C.

Walter S. Montgomery, president and treasurer of Spartan Mills, Spartanburg, S. C., has been named chairman of the board of trustees of Converse College in Spartanburg. Montgomery was named a member of the board in 1937.

Several personnel promotions have been announced by Fulton Bag & Cotton Mills, Atlanta: Warren W. Danner, former controller, has assumed the responsibilities of general superintendent of greige mills. Before joining Fulton in 1956, Danner served with several Southern mills in supervisory capacities. . . J. A. Bradshaw has been appointed maintenance superintendent of greige mills. Bradshaw has been with Fulton for 20 years, having worked in several key positions in the greige mills. . . Luther Wallace has been named superintendent of towel manufacturing, a new post.

Wallace, who joined the company in 1947, was formerly superintendent of the textile bag operation in Atlanta.



Frank Nerney

Frank Nerney has been named manager of the newly-created Southeastern sales territory of Becco Chemical Division, Food Machinery and Chemical Corp., Buffalo, N. Y. The new territory comprises the states of Georgia, Alabama, Mississippi, central Tennessee and northern Florida. Nerney, a graduate of Lowell Textile Institute, joined Becco in 1938 as a research chemist. In 1949 he was transferred to the sales department, and in 1957 was appointed technical assistant to the Southern sales manager.

C. L. Billings has been appointed assistant superintendent of the Tifton (Ga.) plant of Peerless Woolen Mills, branch of Burlington Industries, Greensboro, N. C.

Melvin D. Cobb has been named manager of the Walhalla, S. C., plant of Chicopee

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PERSONAL NEWS

Mfg. Co., Gainesville, Ga. Cobb, who succeeds Newton G. Hardie who died recently, joined Chicopee in 1946 as supervisor-trainee. Later he was named assistant superintendent of the Walhalla plant. . . . Clyde Cox has been promoted from general foreman of weaving to assistant superintendent. . . . Henry White has been promoted from shift foreman in the weave room to general foreman of that department. . . . Ellison Jamison succeeds White as shift foreman.



Paul H. Gill

Paul H. Gill has been named to the newly-created position of director of marketing at Whittin Machine Works, Whitinsville, Mass. Shortly after graduation from Massachusetts Institute of Technology, Gill obtained his master's degree in sales management and marketing from the Harvard Graduate School of Business Administration. He was formerly with Bruce Payne & Associates, management consultants of Westport, Conn.

The Wellington Sears Co., New York City sales subsidiary of West Point (Ga.) Mfg. Co., has named six new officers. Donald W. Hawley has been named vice-president in charge of Fairfax towel sales. Hawley has been with the company since 1935 when he joined the sales force in the heavy goods department. . . . John R. O'Neill, associated with the company since 1946, has been named as assistant treasurer. A

graduate of Princeton, he has served as assistant credit manager and credit manager. . . . Henry Keller Jr. has also been elected an assistant treasurer. . . . Edgar L. Henderson Jr. has been named controller. . . . Ed C. N. Benton and George A. Boll have been named assistant controllers. . . . Cam F. Boll, formerly personnel and office manager, has been named assistant to the vice-president in charge of the woolen division.

James L. Truslow has been made a vice-president of the West Point (Ga.) Mfg. Co. Formerly associated with Saco-Lowell Shops, Boston, Mass., Truslow joined West Point in 1955 as its foreign representative with headquarters in London.

S. Spratt Blankenship has joined the Bristol, Va., yarn mill of Bigelow-Sanford Carpet Co. as overseer. Blankenship was formerly connected with the Santa Rosa Plant of the American Cyanamid Co. in Milton, Fla.

Joseph William Chalmers has been named assistant to the general superintendent of Borden Mills, Kingsport, Tenn. Chalmers, a graduate of Clemson College in textiles, was overseer of weaving at the Amerotron plant in Red Springs, N. C., immediately prior to joining Borden.



Lanier Williams

Lanier Williams has been named sales representative in Georgia, Alabama and Tennessee for the Whitinsville (Mass.) Spinning Ring Co. He will handle the company's complete line of spinning and twister rings and accessories. Williams

will make his headquarters in West Point, Ga.

Allen S. Bedell, chairman of the board of the J. E. Sirrine Co., Greenville, S. C., has resigned because of his health. . . . R. R. Adams has been chosen to succeed Bedell. . . . George Wrigley Jr. will succeed Adams as president of the firm.

Charles R. Blossom has been appointed assistant manager of sales, rayon filament yarns, Celanese Corp. of America, textile division with headquarters in Charlotte. In his new position Blossom will be in charge of rayon filament yarn sales under the direction of R. H. Powers, who recently assumed the position of manager of sales for all filament yarns. Blossom joined Celanese in 1955 as a salesman in the New England district.

John A. McCarn, formerly superintendent of Imperial Yarn Mills, Belmont, N. C., is now overseer of carding, spinning, twisting and winding at the Adrian Plant of American & Efrid Mills, Mount Holly, N. C.

Jerome T. Collins has joined Eastman Chemical Products Co., Kingsport, Tenn., in a sales merchandising capacity. Collins' headquarters will be in New York where he will act as Eastman liaison with the New York and Southern operations of major textile mills and co-ordinate his activi-

ties with the apparel and home furnishings merchandise managers. The post is a new one. Previously a vice-president of Mojud Co., Collins brings a broad knowledge of textile merchandising to his new assignment. He has also been associated with J. P. Stevens & Co. as sales manager of its yarn sales division.



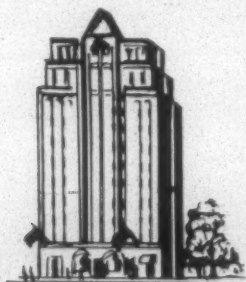
Hugh M. Brown

Dr. Hugh M. Brown of Clemson, S. C., has been appointed textile consultant to The Sheffield Corp., Dayton, Ohio, manufacturer of precision instruments and scientific controls for industrial processing. Dr. Brown will assist in the development of new types of pneumatic and electronic gages and measurement standards for textile materials ranging from raw stock through finish product. He holds numerous patents for textile testing devices and machinery. Until his retirement in 1957, Dr. Brown served as head of the School of Textiles at Clemson College. Previous associations included three years in radar research with the Massachusetts Institute of Technology radiation laboratory, and 15 years with the physics department of Clemson College. He is a member of the Textile Research Institute, Fiber Society, American Society for Quality Control, textile division, and the American Society for Testing Materials and the Textile Institute of England.

Roy M. Babb Jr. has been promoted from loom fixer to foreman of weaving at Gaffney (S. C.) Mfg. Co. . . . William K. Child Jr. has been elevated from training director to superintendent of the pilot plant. . . . Marvin M. Culpepper, formerly assistant weave room overseer, has been named overseer of the warp preparation department. . . . Charlie L. West, foreman in the weaving department, has been named training director. . . . Jimmie R. Conn, special projects engineer, has been named general supervisor of the second shift. . . . Wayne Alexander, formerly with Wiscasset Mills at Albemarle, N. C., has joined Gaffney in a supervisory capacity.

Robert E. Lee has been named personnel manager of the Statesville, N. C., division of Seminole Mills. Lee is a graduate of Wofford College and previously had served as personnel manager of Union-Buttall Mills.

A realignment of organization structure and individual responsibilities in the sales department of the fibers division of American Viscose Corp., Philadelphia, Pa., has been announced. Malcolm V. Macfarlan continues as general sales manager for the fibers division and will be aided by Charles J. Mills as assistant general sales manager. Mills previously held the position of sales manager for acetate fibers. Acetate and rayon activities were combined recently to form the new fibers division. . . . Norman A. Cocke Jr., formerly sales manager for textile fibers, has been named to the new position of textile products manager. He will be aided by Arthur S. Cookman, for



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rayon staple; James A. Webber, for rayon textile filament; and C. Harry Scott, for acetate yarns. . . . Frank T. Williams continues as sales manager for tire yarns, and Thomas H. Andrews for Filatex elastic yarns and Vinyon. . . . Samuel B. Lippincott and John Wiggins have been given new posts in merchandising and product development. Lippincott, presently manager of home furnishings merchandising, will assume responsibility for merchandising and product development activities concerning both home furnishings and apparel. Stanley H. Rose will be associated with Lippincott in charge of apparel merchandising. John Wiggins is named manager of the merchandising and product development activities for all industrial applications of Avisco fibers, with the exception of tire yarn. Wiggins was previously associated with rayon staple sales for industrial uses.



Fred Phillips

Fred Phillips has been named Southern district manager for the New York & New Jersey Lubricant Co., succeeding the late Lewis W. Thomason Jr. Phillips has been with the company since 1941 as a sales representative. He brings to his new duties almost 20 years of actual mill experience and familiarization with lubrication problems.

Ralph J. Boyles, a loomfixer in the blanket weave room of the Fieldcrest Mills plant in Draper, N. C., has been named assistant foreman in the wool spinning department, third shift. Boyles succeeds Raymond Hopkins, third shift assistant foreman, who will move up to the second shift replacing Grover C. Swinney, who has retired.

D. Crawford Smith has been named product sales manager of the rayon staple department of American Enka Corp., Enka, N. C. Smith succeeds William B. Shepard, who recently resigned. He joined Enka in 1936 and for the past year has been assistant sales manager of the company's rayon department.

Ralph Garner has been named superintendent of Quaker Meadows Mills, Hildebran, N. C.

The election of two new vice-presidents of the Pacific Mills division of Burlington Industries has been announced. . . . Thomas W. Shoemith, located in Clarksville, Va., manager of Pacific's finishing division, and M. E. Sibley, a divisional manufacturing executive of Pacific with headquarters in Halifax, Va., were named vice-presidents of manufacturing.

Hubert A. DesMarais has been named Southern sales manager for Francolor Inc., with headquarters in Rock Hill, S. C. DesMarais will be responsible for Francolor customers in Georgia, North Carolina, South Carolina and Virginia. Arrangements are now being made for stocks to be carried in Francolor's Southern location and imports are being made through the port of

Norfolk, Va. DesMarais has long been associated with the dyestuff industry, managing General Dyestuff's Pacific Coast branch for 20 years. His most recent association was with the Southern office of Verona-Pharma Chemical Co.

Frank C. Sherrill has been named technical superintendent of Joanna (S. C.) Cotton Mills, division of Joanna Western Mills Co. For the past five years Sherrill has been chief industrial engineer. . . . John E. Willingham, who has been a member of the industrial department for five years, succeeds to the post of chief industrial engineer. . . . James P. Sloan has been named as director of industrial relations, having supervision of employee welfare, personnel practices, publicity and publications, and management-employee communications. . . . David Boland, assistant personnel manager since 1952, has been promoted to personnel manager.

D. Crawford Smith has been appointed product sales manager of the rayon staple department of American Enka Corp. Smith, who succeeds William B. Shepard who recently resigned, joined Enka in 1936 and for the past year has been assistant sales manager of the rayon staple department. Previously, he was product sales co-ordinator of Enka's textile filament operation. Prior to that, he held merchandising and sales positions in the company's New York City, Greensboro, N. C., and Chattanooga, Tenn., offices. He is a graduate of the University of North Carolina.

A. Mason DuPre Jr. has been named assistant to the administrator of the Agricultural Research Service of the U. S. Department of Agriculture. DuPre, who has served as special assistant to the director and assistant director of the Southern Utilization Research & Development Division in New Orleans, assumed his new duties December 3. DuPre has been with the Department of Agriculture since 1931.

Frank G. Binswanger Jr. has been elected president of the Southern division of Frank G. Binswanger Inc., national industrial realtor. He succeeds his father, Frank G. Binswanger Sr., who was named vice-chairman of the board, Southern division, and who continues as president of the Northern division. . . . Robert L. Huffines Jr. of White Hall, S. C., and Greenwich, Conn., was re-elected chairman of the board of the Southern division, which has offices in Philadelphia, New York, Charlotte and White Hall.

The management of Opp Cotton Mills and Micolás Cotton Mills, Opp., Ala., has announced the following personnel changes: L. D. Sayers from superintendent of the two mills to general manager. . . . G. Ray Jeffcoat from assistant superintendent of both mills to superintendent of Opp. . . . L. C. Sterns from general overseer of carding and spinning of both mills to assistant superintendent of Micolás. . . . Carlos White from assistant to overseer of carding and spinning, Opp. . . . P. W. McKee from assistant to overseer of carding and spinning, Micolás. . . . George Pierce from technical department to second hand, carding and spinning, Opp. . . . Otha Ross from foreman to second hand, Micolás. . . . Rob-

ert Booth from overhauled to second hand, Micolás.



John Hilldring

John Hilldring has been named chairman of the board of General Aniline & Film Corp. He has served as the firm's president since 1955, and has been with the company since 1947. In his new capacity, he will serve as a full-time board chairman, and will continue to act as chief executive officer of the company. Succeeding him as president is Philip M. Dinkins, former vice-president and general manager of the company's dyestuff and chemical division. Dinkins joined General Aniline in 1955 and was elected to the board in 1956. Prior to 1955 he was president and a director of Jefferson Chemical Co. From 1923 to 1946 he was associated with the American Cyanamid Co.

William B. Shepard has been named to the newly-created post of director of marketing for Hartford Rayon Co., division of Bigelow-Sanford Carpet Co., New York City. Shepard will be responsible for sales and product development. A veteran of 18 years in the textile field, Shepard was formerly products sales manager, rayon staple, for the American Enka Corp. He has also served as vice-president in charge of sales for Hans Rees Co. and as assistant sales manager, industrial fabrics division, for Burlington Industries.



Benjamin J. Zalkind

Benjamin J. Zalkind, former operations manager of National Worsted Mills, Jamestown, N. Y., and for almost 20 years associated with the development of advanced methods of spinning, has joined the Roberts Co., Sanford, N. C., in connection with its recently established worsted spinning machinery division. From 1950 to 1956, when he joined National Worsted, Zalkind was general manager of Kanmak Mills, Manchester, N. H. He had previously been president and general manager of Normandie Mill, Nashua, N. H., a small yarn mill on the American system of spinning. It was from 1929 to 1947, when he was associated with Saco-Lowell Shops, Boston, Mass., in that company's research and development division, that Zalkind worked on new machine and processing developments and did sales service work for mills throughout the world. He developed the Model Z system of long-staple spinning.

George Dorn, technical superintendent of the Johnston, S. C., mill of Excelsior Mills worsted division, has been transferred to the McCormick, S. C., mill as technical superintendent. . . . Hunter Ackis, overseer of the Warner Swasey weave room at Johnston, has been named technical superintendent of the mill. . . . Fred Hill, supervisor of industrial engineering, was named to suc-

ceed Ackis as overseer. . . . William T. Mundy, supervisor of industrial engineering at the McCormick mill, was transferred to Johnston as supervisor of industrial engineering.

William R. MacIntyre Jr. has been named vice-president and general manager of Joseph Bancroft & Sons, Wilmington, Del., manufacturer of Ban-Lon yarns. Named to the company's board of directors for the first time was Dr. A. L. Lippert, vice-president in charge of research. All other officers of the company and board members were re-elected.

Louis K. Eilers has been named first vice-president of the Tennessee Eastman Co. and the Texas Eastman Co., divisions of the Eastman Kodak Co. The Tennessee division of the company produces man-made fibers. Dr. Eilers, who has been vice-president and assistant general manager of the Eastman Kodak Co., will succeed William S. Vaughn, who has been elected vice-president and general manager of the parent organization.

J. Clyde Aycock has been appointed sales representative to the textile trade for the Southern division of Clinton (Iowa) Corn Processing Co. Aycock has been employed in the textile field for the past 20 years. He will headquarter in Greenville, S. C.

Hal T. Gilbert has been promoted from superintendent to plant manager at the Athens, Ga., plant of Chicopee Mfg. Corp. Gilbert succeeds D. D. Quillian, who has been named general manager of manufacturing at the plastic weaving plants at Cornelia and Buford. . . . Doma A. Watson has been promoted from general foreman of weaving to assistant superintendent. . . . George Scott, formerly head of the stand-

ards department, succeeds Watson as general foreman. . . . Marvin Doster has been named to succeed Scott as head of standards.

Dave Yoder, formerly with the city of Gastonia, N. C., has joined Kluttz Rings Inc., Gastonia, and will be in charge of research and development.

Lloyd K. Williams, superintendent of Peerless Cotton Mills, Thomaston, Ga., has been named general chairman of the Textile Operating Executives of Georgia. Williams succeeds Clyde C. Cobb, assistant general manager of Riegel Textile Corp., Trion, Ga. . . . W. S. James, superintendent of Summerville (Ga.) Mfg. Co., has been elected vice-general chairman. . . . Herman A. Dickert, a professor at the A. French Textile School of Georgia Tech, was re-elected secretary-treasurer.

Lewis Doggett has been named technical superintendent of the Monarch Plant of Monarch Mills, Union, S. C. Doggett has been serving as supervisor of the laboratory department of the mill. A graduate of Duke University, Doggett joined the company as an operations research engineer in 1955. . . . Roy Yantis has been named technical superintendent of the firm's Lockhart plant. He previously served as standards department supervisor. Yantis joined Monarch in 1949. He is a graduate of Georgia Tech.

include two daughters, a son, a sister and a brother.

C. M. Cranford, 64, retired overseer of the Springs Cotton Mills at Chester, S. C., died last month after a long illness. Mr. Cranford was employed by Springs for 25 years. At the time of his retirement he was overseer of spinning at the Springsteen plant. Survivors include his widow, a daughter and a son.

William Roger Kelly, 50, for many years purchasing agent for the Brighton Mills, Shannon, Ga., division of Burlington Mills, member of Burlington Industries, died December 9. Surviving are his widow, a son and four brothers.

R. Bryant Kersey, 69, retired assistant vice-president of the Hillcrest Division of Callaway Mills, Manchester, Ga., died last month after a short illness. Mr. Kersey joined Callaway in 1909 as second hand in spinning at the Unity Plant. He is survived by his widow and two children.

Charles A. Rudolph, 50, supervisor of the Lumite Division of Chicopee Mfg. Co., Gainesville, Ga., died early this month. Survivors include his widow, three sons, a daughter, a brother and a sister.

Allen Boyd Tennant, 58, superintendent of spooling at Springs Cotton Mills, Lancaster, S. C., died November 25 after a heart attack. Mr. Tennant graduated from Clemson College in 1925.

James Thompson Wardlaw, 77, retired treasurer of Drayton Mills, Spartanburg, S. C., died last month in Spartanburg. Mr. Wardlaw had retired from Drayton in 1952 after 20 years' service. For 18 years he served as treasurer. Surviving him are his widow and a son.

OBITUARIES

Thomas Chatterton Cox Sr., 83, former president of Wade Mfg. Co., Wadesboro, N. C., producer of cotton flannels and sheetings, died last month. Survivors

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

WESTMINSTER, S. C.—Beacon Mfg. Co., Asheville, N. C., has bought over \$800,000 worth of cotton spinning machinery for its Oconee Mill here, producer of cotton yarns and blankets. The units, MR3 ring frames by Platt Bros. of England, were purchased through Atkinson, Haserick Co., Platt representative.

HALIFAX, VA.—Pacific Mills here, member of Burlington Industries, reports a drop of 89% in profits for the fiscal year ended September 27. Net earnings from operations amounted to \$138,000 or 14 cents a share on sales of \$76,298,000. This compares with net profit of \$1,257,000 or \$1.31 a share on sales of \$81,117,000 in the previous fiscal year. Provision of an estimated future loss of \$180,000 on sales of properties at Carrboro, N. C., is not reflected in the 1958 fiscal year earnings.

GREENSBORO, N. C.—An enlarged research and development department is being set up by Cone Mills Corp. here as part of its current expansion program. The new unit includes a pilot plant for fabric

development. The research and development of new fabrics will extend to new finishes, coloring, weaving, equipment operation and effects of resins on cotton.

WILMINGTON, DEL.—Second quarter net income for United Merchants & Manufacturers should be substantially better, according to the company. The second quarter ends December 31. Earnings for this year are expected to be more than the \$7,145,487 or \$1.20 a share earned last year. The firm's Robert Hall Clothes Inc. subsidiary opened ten stores in the Fall and expects to open 15 in the Spring. The subsidiary now has 273 stores.

SALISBURY, N. C.—Erlanger Mills Corp. here, which operates Erlanger Mills in Lexington and North Carolina Finishing Co. in Salisbury, reports a consolidated net profit of \$733,618 on sales of \$27,516,032 for the fiscal year ended August 30. The company did not give individual figures for the Lexington and Salisbury operations. This compares with a net profit of \$838,543 on sales of \$28,092,710 for the previous

fiscal year. On August 30, current assets were listed at \$16,505,536 with liabilities of \$1,957,121 as compared with assets of \$16,659,133 and liabilities of \$2,269,094 at the end of the previous year.

PACOLET, S. C.—Pacole Mfg. Co. here, producer of sheetings, drills and twills, suffered \$150,000 damage recently when a fire was set off in the plant by an explosion. The fire started from an explosion at a hoister, fueled by decompressed gas, and the chief damage was to the cotton. Only slight damage was reported to the warehouse.

CHATTANOOGA, TENN.—Net earnings of Standard-Coosa-Thatcher Co., cotton yarn and thread producer here, for the fiscal year ended September 27 were \$573,480 or 74 cents a share on sales of \$19,901,145 compared with earnings of \$808,346 or \$1.05 per share on sales of \$22,537,197 for the previous year. Current assets were listed at \$9,093,966 and current liabilities at \$1,533,795. During the year, \$778,533 was spent on plant and equipment replacements

and improvements. The company reported that it will continue to invest in capital improvements at a rate in excess of the charge for depreciation in order to keep its plants in a competitive position.

GASTONIA, N. C.—Net sales of Textiles Incorporated and subsidiaries for the fiscal year ended September 27 totalled \$24,153,670 with net earnings of \$649,377. This compares with sales of \$28,221,528 and earnings of \$1,051,962 in the previous fiscal year. Current assets were shown at \$10,585,002 against \$11,964,426 in 1957. Current liabilities were \$937,313 compared to \$2,303,644 at the end of the previous year. Directors declared the regular quarterly dividend of 15 cents on the common stock, payable December 10 to stockholders of November 22. Sales orders on the books amounted to 13 weeks production at the end of the fiscal year, based on a five-day operating schedule.

BELMONT, N. C.—Stockholders of Imperial Yarn Mills here have authorized a committee of four to sell its assets and/or study the possibility of a merger with another concern. Members of the committee are R. L. Stowe Jr., Julius Abernathy, S. P. Stowe Jr. and D. J. Stowe. The plant has 18,824 spindles and has a village for its employees. The company revealed that it had a tax loss carryover of several hundred thousand dollars and is unable to finance a modernization program.

DANVILLE, VA.—Dan River Mills here has placed an order for 150 Draper shuttleless looms with delivery scheduled to begin in the latter part of January. The looms, which have a 50-inch width, will be used in the manufacture of pillow case goods. The new looms will be designed to operate at 220 p.p.m.

SENECA, S. C.—A 40,000-square-foot unit will be added to the Kendall Co. plant here. The new addition will be used for warehouse space, a machine shop, locker room and a loading dock. Total floor space will be 149,000 square feet. The company is consolidating here its operations at South Bend, Ind., and Chicago. The plant will make athletic supporters, surgical belts and elastic hose.

STATESVILLE, N. C.—The local plant of Seminole Mills, subsidiary of United Merchants & Manufacturers, plans to add 125 looms to step up the production of decorative and industrial fiber glass fabrics. The expansion program will raise the total payroll to over 500. The looms will be installed in the existing plant.

GREENSBORO, N. C.—Burlington Industries Inc. reports consolidated net sales of \$651,461,000 and net earnings of \$11,687,000 for the fiscal year ended September 27, 1958. The figures compare with sales of \$671,191,000 and earnings of \$15,362,000 for the 1957 fiscal year. Net earnings from operations, after preferred dividends, were equal to \$1.21 per share of common stock in fiscal 1958, against \$1.64 per share the previous year. In the fiscal year ended September 27, 1958, income taxes were \$13,844,000, minority interests in earnings were \$236,000, and there were 8,519,691 com-

mon shares outstanding at the end of the period. In the fiscal year ended September 28, 1957, income taxes were \$18,062,000, minority interests in earnings were \$805,000, and there were 8,507,348 common shares outstanding at the end of the period. These earnings did not include a non-recurring net capital gain of \$592,000 realized on the sale of fixed assets and investments.

GASTONIA, N. C.—Employees of Threads Inc. here have turned down representation by the Textile Workers of America by a vote of 262 to 228. There were 14 challenged votes. The election was conducted by the National Labor Relations Board.

ATLANTA, GA.—In an election conducted by the National Labor Relations Board the employees of Southern Mills Inc. here rejected representation by the Textile Workers Union of America. The vote was 83 against the union, 46 for the union, two challenged ballots and one void ballot. The company, which manufactures laundry textiles, has plants at Roswell and Senoia, Ga., as well as in Atlanta.

ASHEVILLE, N. C.—An estimated \$350,000 damage was done to the Caldale Blanket Co. here by a fire which swept the mill last month. Damage to the plant was estimated at \$150,000 and to stocks, \$200,000.

LINDALE, GA.—Pepperell Mfg. Co. here has added a new 100,000-square-foot unit to house 1,000 additional looms. Pepperell manufactures chambrays, coverts, canton flannels, denims, cords, twills, sateens, poplin and pin checks.

RAMSEUR, N. C.—Klopman Mills Inc., producer of worsted and long fiber synthetic sales yarn and a member of Burlington Industries, has placed a contract with the Roberts Co. of Sanford, N. C., for the purchase and installation of 17 Arrow WM-2 spinning frames, totalling 4,080 spindles, for its plant here. Several months of concentrated tests on two Arrow frames purchased in late Summer preceded the Klopman decision.

GREENVILLE, S. C.—Woodside Mills will install 100 Draper shuttleless looms in its plant here beginning in April. About 160 conventional E model looms will be removed to make room for the new looms. Robert S. Small, Woodside president, described the move as "a research project." It will cost about \$500,000. The company's Simpsonville, S. C., plant has been using Unifil loom winders experimentally for

about two years and will now get the attachment on all 534 looms at a cost of \$400,000.

CHARLOTTESVILLE, VA.—Charlottesville Woolen Mills here, woolen and worsted cloth producer, is curtailing its operation due to the seasonal drop off of civilian fabric business and will operate with a staff of about 100 until the end of January when the company expects the opening of the civilian market to make it possible to bring employment up to 250.

SHERMAN, TEX.—Current production at Sherman Mfg. Co. here is reported to be breaking all records of the plant. More than a quarter million pounds of greige goods are being woven each week, an increase of 25,000 pounds over previous records. The poundage includes about half-and-half sheeting and duck fabrics. The company has ordered 44 new looms which will also increase production.

SUMTER, S. C.—A spinning mill with an annual payroll of between \$250,000 and \$300,000 is locating in Sumter. Worsted Spinning Mill, with an authorized capital stock of \$300,000, is anticipating annual sales of \$2.5 to \$3 million. Eventual employment of the plant will be about 110.

DURHAM, N. C.—Erwin Mills Inc. here reports a net profit of \$1,069,312 or 99 cents a share for the fiscal year ended September 30, as compared with \$1,531,659 or \$1.41 a share in the previous year. Net sales for the fiscal year totalled \$57,716,068 against \$59,758,285 in the fiscal year of 1957. Some \$1,765,018 was spent for mill improvements in the year.

CHARLOTTE, N. C.—J. P. Stevens & Co. will consolidate its accounting and bookkeeping offices here on the second and third floors of the downtown Coddington Building after the first of the year. Since its removal here from New York City some two years ago, the controller's department with 200 employees has occupied space at four downtown locations.

LINCOLNTON, N. C.—An addition to the plant of Globe Mills Co. here is now in the planning stage, according to C. S. Clegg, Globe president and treasurer. The construction, which will increase the manufacturing space, is part of a continuing program of plant improvement. The firm, with headquarters in Mount Holly, N. C., produces carded knitting yarns. The Lincoln plant has 65 cards and 17,028 spindles and employs some 140 persons.

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GREENSBORO, N. C.

Helmus Named To Head A.A.T.C.C.

Weldon G. Helmus, vice-president of Fair Lawn (N. J.) Finishing Co. has been elected president of the American Association of Textile Chemists & Colorists for the year 1959. He is currently vice-president of the Central Atlantic region. Nominated by the Metropolitan section on petition, Helmus defeated George O. Linberg of Synthron Inc., Aston, R. I., who was running for a third term in the annual election.

In the contests for regional vice-presidents, C. T. Anderson, manager of the Philadelphia office of Ciba Co., was elected to represent the Central Atlantic region. He defeated Bernard K. Easton of Becco Chemical Division, Food Machinery Corp. in Buffalo, N. Y. Dr. W. Geo. Parks, head of the chemistry department of the University of Rhode Island, Kingston, was chosen to represent the New England area. Dr. Parks ran against Dr. J. Edward Lynn, consultant, Old Greenwich, Conn. Ernest R. Kaswell of Fabric Research Laboratories, Dedham, Mass., now completing his third term as New England vice-president, was not a candidate this year.

Re-elected vice-presidents were H. Gillespie Smith, Southeast manager of the dyes department, American Cyanamid Co., Atlanta, for the Southern area, and Elliott Morrill of Corn Products Co., Indianapolis, Ind., for the Western region.

Saco-Lowell Completes Sales Realignment

Saco-Lowell Shops has outlined the recent reassignment of personnel in its textile machinery sales division, and has announced the relocation of its Greenville District sales and service office. According to J. Woodward Hubbard, general sales manager, the general sales office located at the textile machinery division, Easley, S. C., plant, includes in addition to himself, Herman J. Jones, assistant general

sales manager; H. M. Walsh, sales co-ordinator; A. A. Molnar, service co-ordinator; H. V. Manseau, supervisor of sales engineering; A. K. Bonge, supervisor of customer sales demonstration area; and A. L. Park, whose activities will be focused on the Fleissner dryer.

The Greenville district office, headed by James W. Dickert, district manager, will move January 1 from the Easley plant to 201 East North Street, Greenville. Located in that office will be Lewis V. Chalmers, sales engineer; Ernest Walters, district service manager; and Glenn Huntley, service engineer.

Other district offices and their sales and service personnel are as follows: Greensboro, N. C.—Fletcher S. Culpepper, district manager; M. R. Harden, sales engineer; Richard W. Hanson, district service manager; and B. L. Holliday, service engineer; Atlanta, Ga.—James E. Wright, district manager; M. Earl Heard Jr., sales engineer; James L. Pilkey, district service manager; and L. E. Becknell, service engineer; Charlotte, N. C.—Edward T. Cansler, district manager; C. Perry Clanton, sales engineer; Harvey D. Sills, district service manager; and B. H. Kennedy, service engineer; New England District—G. Fulton Wilcox, district manager; Arthur E. Dubois Jr., service manager; and Hilton Hall, service engineer.

Jordan Elected President Of Durene Assn.

U. S. Senator B. Everett Jordan (Dem., N. C.) has been elected president of the Durene Association of America, comprising the leading manufacturers of quality mercerized cotton yarn. Senator Jordan, who is treasurer of Sellers Mfg. Co., Saxapahaw, N. C., succeeds T. C. Smotherman, vice-president of American & Efrid Mills, Mount Holly, N. C.

Other officers elected at the association's annual board meeting in New York were R. D. Hall Jr. of The American Thread Co., New York, who became vice-president, and



Pullen, Bryan, Howell, Boyd

CHATTANOOGA YARN ASSOCIATION—Newly elected 1959 officers of the Chattanooga Yarn Association include R. Dan Pullen, Standard-Coosa-Thatcher Co., assistant secretary-treasurer; George S. Bryan, Dixie Mercerizing Co., secretary-treasurer; R. K. Howell Jr., American Thread Co., vice-president; and R. W. Boyd, Leon-Ferenbach Inc., president. The group's 1959 outing will be held September 17-18 at The Read House in Chattanooga.



B. Everett Jordan R. D. Hall Jr. Joseph P. Holt

Joseph P. Holt, president of Aberfoyle Mfg. Co., Philadelphia, Pa., who was re-elected treasurer. A. C. Layton Newsom was re-appointed executive secretary, a post he has held since 1942. Newsom co-ordinates the association's activities from offices at 350 Fifth Avenue in New York City.

In addition to election of officers for 1959, the board heard a detailed presentation of advertising and promotional plans for the coming year. The plans represent an extension of the highly successful Durene promotions of 1958, which stressed the quality standards of mercerized cotton yarn met by all member companies.

Senator Jordan has been active for many years in business, educational and philanthropic work in North Carolina. He is a trustee of Duke University at Durham and of Elon College, Burlington. A past director of the North Carolina Textile Manufacturers Association, he is also board chairman of Alamance County Hospital at Burlington and has been a member of the State Medical Care Commission.

N. C. Textile School Accepting Students

New students will be accepted at the North Carolina Vocational Textile School, Belmont, N. C., on January 2 in all courses. The school offers courses in yarn manufacturing, weaving and designing, knitting, mill maintenance and tailoring. Classes run from 8:20 a.m. until 1:00 p.m. and from 2 until 6:30 p.m. Employees who have to work until 3:00 p.m. may attend classes from 3:30 until 6:30 p.m.

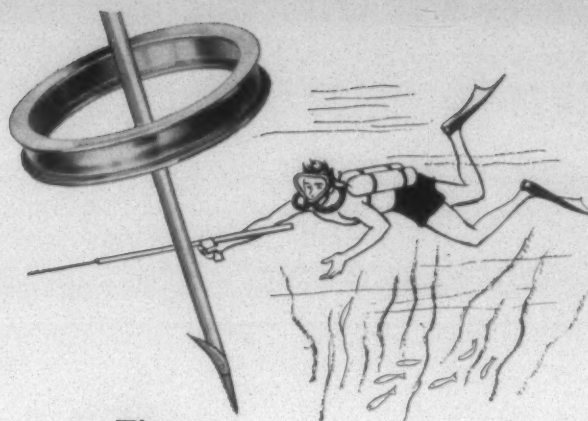
The school also announced the gift of a G. K. Automatic Picker Lap Scale which was on display at the Southern Textile Exposition. Interested persons may visit the school and observe the unit in operation.

A. B. Carter To Close New England Office

The New England office of A. B. Carter Inc., located at 139 Main Street, E. Greenwich, R. I., under the supervision of Clifford E. Herrick, will be closed as of February 1, 1959. Herrick will continue as the firm's consultant with reference to knotters and bonders. All future orders should be addressed to Mill Devices Co., P. O. Box 237, Gastonia, N. C., from where all future shipments will be made. Carter also acts as representative for Carter Traveler Co., manufacturer of ring travelers.

Japanese Wool Quota Attacked

The Wool Manufacturers Council of the Northern Textile Association at a meeting in Boston recently denounced the Japanese wool fabric export quota as being an insult to the intelligence of the American manufacturer. "The announcement . . . clearly demonstrates a national plan by Japan to concentrate imports even further on the better quality woolens, which will force more American mills to liquidate with consequent hardship and unemployment,"



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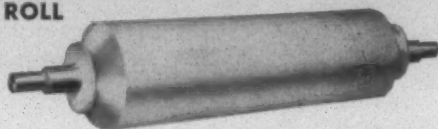
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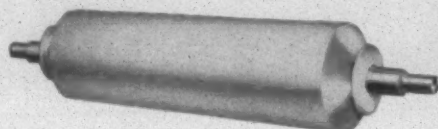
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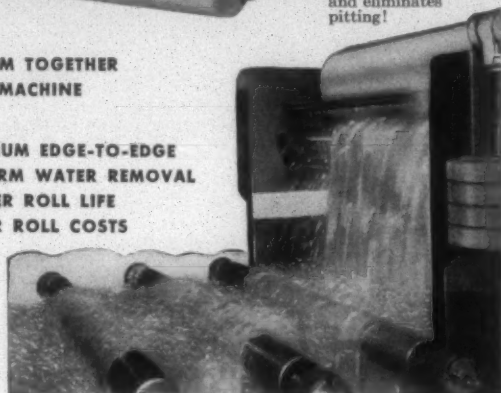
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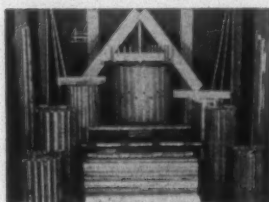
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the statement said, and noted that this type of import concentration is particularly damaging to New England mills.

"Under these circumstances our Government should immediately make known to the Japanese Government that this arrangement is so detrimental to U. S. mills that unless changed to a workable and acceptable formula, import quotas on Japanese woolen goods will have to be imposed by the U. S.," the statement concluded.

New Flash Ager Introduced

The Shirley Institute of Manchester, England, has developed a new unit for the aging of vat colors which is said to be less expensive than existing machines. Called the Shirley Flash Ager, the machine is said to be capable of handling cloth up to 42 inches wide at a maximum speed of about 20 yards a minute. It is expected that the speedy processing brought about by the unit can be employed in other finishing processes such as desizing and bleaching.

In operation, the printed fabric is padded with a solution of sodium hydrosulphite and caustic soda and is passed between the surface of the cylinders, which are heated to approximately 102° C., and an endless belt which excludes air and prevents evaporation of moisture. The institute reports that the cylinders may be run at different temperatures when desirable. The unit is said to take much less steam than conventional agers. It was originally designed for the steaming of prints made using the Colloresine process, a print method using cellulose ether of sodium hydroxyacetate as a thickening agent.

Burlington To Spend \$15 Million

In 1959 Burlington Industries, Greensboro, N. C., expects to make commitments for about \$15 million in new expenditures for improvements, replacements, renovations and expansion at various plants, according to J. C. Cowan, vice-chairman of the board. This amount will be in addition to approximately the same amount in outstanding commitments for projects not yet complete.

Cowan reported that over the past five years the company's capital spending had included \$65 million on improvements, replacements and renovations, and \$23 million on expansion at various plants.

Maid Of Cotton Contest Set

Twenty Cotton Belt beauties will compete for the title "Maid of Cotton" in contest finals in Memphis on December 29-30. Judges for the contest will be: chairman, Miss Janet Livingstone, fashion director of *Good Housekeeping*, New York City; L. G. Hardman Jr., president of Harmony Grove Mills, Commerce, Ga.; Marc Anthony, president of the Farmers & Merchants Compress Warehouse Co., Dallas, Tex.; Frank Crump, president of the Memphis Cotton Exchange; R. G. Snowden, president of the Memphis Cotton Carnival Association; Edward J. Meeman, editor of the *Memphis Press-Scimitar*; and Ed Lipscomb, sales promotion director of the National Cotton Council.

Textile Employment Down In Southeast

According to figures released by the U. S. Department of Agriculture, textile employment in the Southeast (Vir-

ginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida and Tennessee) was off by 23,500 in the month of October as compared with October 1957. In all manufacturing some 47,800 fewer persons were employed in October of this year than in the same month last year.

Japanese Members Resign From Silk Council

The eight Japanese members of the American Silk Council have resigned following the decision of the council to retain counsel to seek relief in Washington from silk exports from Japan and assess members for that purpose. The council also adopted as its own position the statement made by Milton H. Rubin, president of the American Silk Mills, before the special subcommittee of the Senate studying the textile industry.

Rubin testified that the only solution to the problems of the domestic silk manufacturer was either a voluntary quota system administered by the Japanese or an absolute quota on Japanese silk goods to be established here by the U. S. Government. The eight firms resigning were Gunze New York Inc.; Daiichi-Bussan-Kaisha; C. Itoh & Co. (America); Mitsubishi International Corp.; Nichimen Co.; Toyomenka Inc.; and Kanebo New York.

Optimism In Industry Reported

The U. S. textile industry ends 1958 in a mood of optimism that contrasts sharply with the gloomy forecasts expressed at the beginning of the year, according to Halbert M. Jones, president of the American Cotton Manufacturers Institute. Jones, who is president of Waverly Mills, Laurinburg, N. C., said, "In the last quarter of this year we have seen several things that have put most of us in a more optimistic frame of mind."

First and foremost, he said, was the apparent change in government attitude toward the industry and its problems. "The hearings by the Senate subcommittee investigating the problems of the textile industry have piled up a monumental amount of information on which Congress and the executive agencies can draw to develop and administer legislation helpful to this industry. The chairman of the subcommittee, Senator Pastore (D., R. I.), has said that the investigation has shown that the textile industry in America needs special consideration because it has been hurt."

Then, Jones said, an official of the Department of Commerce said while testifying before the subcommittee that the federal two-price cotton system was unfair. This system permits manufacturers to purchase U. S. cotton, taken under the support program, at a price 20% below the cost to American textile makers.

Other bright spots listed by Jones were: improvement of textile markets the last two months, the recommendation of textile securities by many market analysts, the determination by textile manufacturers to produce and merchandise more effectively, continued improvement in the nation's economic health.

"That last point," Jones said, "may be one of the most important because the textile industry was beginning to come out of its own private recession when the national economy slipped into one of its own in 1957. Textiles followed the national downward trend in 1958."

"Our optimism," he continued, "is tempered by the continuing threat of increasing textile imports from low-wage


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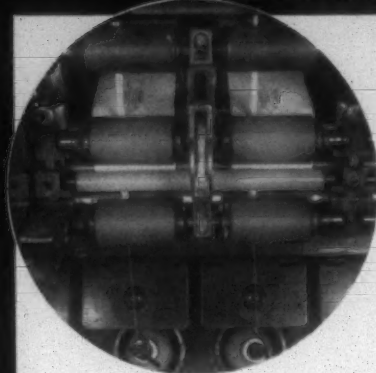
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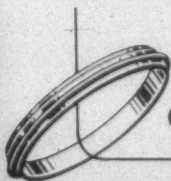
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countries, but if these can be effectively controlled, and if a competitive one-price cotton policy is adopted by government, the textile future is bright."

Executives' Salaries Reported Static

The average top executive stood still in terms of total compensation last year, the American Management Association's ninth annual survey of top management indicates. As a whole, the executive group in American and Canadian industry continued to work for about the same compensation this year as in the year before, according to the report just distributed to subscribers by the association's Executive Compensation Service. In previous, non-recession years the members of this group have increased their average total compensation by 5 to 6% annually.

During the period covered by this latest compensation study normal salary increases were offset by lower bonus payments—in many cases because of conditions over which the executive did not have direct control and even though the management task was more difficult in a recession year. However, there were wide variations between and within industry groups. In fact, the report notes, over-all averages were misleading because of abnormal fluctuation within groups.

Dam To Close Superior Yarn Plants

The construction of a 25,000-acre lake by the Duke Power Co. near Statesville, N. C., will force the closing of the Superior Yarn Mill plants in the area, according to Grady Rankin, president of Superior. Affected by the lake will be the mills at East Monbo and Long Island, N. C. Rankin said the water would back up over both of the plants. He said the water would not threaten the plant for four or five years.

Cotton Evaluation Need Labelled Urgent

A tag of "utmost urgency" has been placed on the need for evaluating the quality of raw cotton and relating this to manufacturing performance. This was announced recently by the National Cotton Council as a result of a meeting of the cotton industry's subcommittee on quality research. The subcommittee is charting the scope and nature of immediate research that will give "new impetus to positive control of quality factors in cotton."

The recently established pilot-scale cotton spinning laboratories at Clemson, S. C., and Lubbock, Tex., will be fully utilized in this greatly expanded quality evaluation research effort and will themselves stimulate even further expansion in this vital area. Evidence strongly indicates that excessive amounts of short fibers seriously affect cotton's spinnability. As a result, emphasis will be placed on efforts to determine how to measure the percentage of short fibers in cotton as an aid to placing the proper spinning value on cotton.

The subcommittee emphasized the immediate need of controlling the drying of seed cotton in the gin. It called for an expanded effort to develop a combination of equipment and instruments to apply heat automatically in proportion to the moisture content of the seed cotton. The subcommittee said early educational efforts will also be made by the Cotton Council, in conjunction with other agencies, to take established information on the effects of over-drying and over-machining at the gin to cotton growers.

and ginners in time to get ginning improvements for the 1959 crop. The subcommittee stated that the possibilities of success of the quality evaluation effort are favorable if all parts of the cotton industry throw their full weight support behind the effort.

Japanese Exports Of Cottons To U. S. Up

Total shipments of cottons to the U. S. from Japan in the first nine months of the year were 81,719,000 square yards, as compared with about 52 million yards in the same period in 1957. The total for the first nine months of this year is already greater than that for all of 1957. The revised export quota is 105 million yards. Shipments of gingham totalled more than 30 million yards out of the year's quota of 35 million. Exports of velveteens in the first nine months reached about 2.2 million yards out of the year's quota of 2.5 million. Exports of cotton piece goods from Japan to the U. S. dropped to the lowest level of the year in September. Shipments for the month totalled 6,026,000 square yards compared with 8,159,000 yards in August and 6,575,000 in September of last year.

Woolen And Worsted Production Down

Woolen and worsted fabric production during the third quarter of 1958 was 70.1 million finished linear yards. This was 3% below the second quarter 1958 output, and approximately 4% below the comparable period of the previous year.

The output of women's and children's clothing fabrics at 40.4 million finished linear yards was 4% above that of the previous period, and 3% above the output of the third quarter 1957. Men's and boys' clothing fabric production decreased 15% during the third quarter to 25.4 million finished linear yards.

Output of nonapparel fabrics was 20% above the previous quarter. Production of blanketing increased 25% to approximately 1.8 million yards. Production of transportation upholstery and other non-apparel fabrics amounted to 0.8 million yards during the third quarter of 1958.

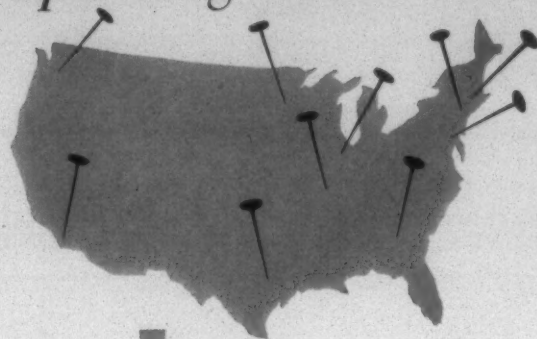
Tire Cord And Fabric Production Up

Production of tire cord and tire fabric during the third quarter 1958 was 91,984,000 pounds. This was 14% above the previous quarter, but 7% below the third quarter 1957 level. The output of rayon tire cord and tire cord fabric increased 23% from the previous quarter's level to 59,081,000 pounds. During the same period the production of nylon tire cord and tire cord fabric increased 5% to 23,638,000 pounds, while the production of cotton tire cord and tire cord fabric (excluding chafer fabrics) decreased 40%. Stocks of tire cord and tire cord fabric on September 27, 1958, were 37,657,000 pounds, or less than 1% above the June 28, 1958, level but 24% less than the stocks on September 28, 1957.

Cotton Consumption Up In October

Total consumption of cotton in the U. S. in October was 833,366 running bales against consumption of 647,894 bales in September and 819,965 bales in October of last year. For the three months through October consumption totalled 2,120,027 bales as compared to 2,144,759 in the same three-month period in 1957. In October cotton grow-

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ing states accounted for 797,037 bales and New England consumed 32,010 bales. The daily average consumption in the U. S. in October was 33,335 bales against 32,395 bales in September and 32,798 bales in October 1957. Daily average consumption in the cotton growing states was 31,882 bales and in New England was 1,280. Stocks totalled 11,612,182 bales against 12,103,951 in October of last year.

Some 7,802 bales of foreign cotton were consumed in October against 5,704 in September and 7,390 in October 1957. Stocks of foreign cotton totalled 101,055 bales as compared to 45,546 bales last October.

Man-made fiber staple consumption totalled 48,473 in October against 37,204 in September and 46,310 bales in October 1957. Some 20,697,000 cotton-system spindles were reported to be in place in October against 20,666,000 in September and 21,093,000 in October of last year. Some 19,279,000 of the spindles were reported active and operating hours totalled 11,447 million.

Woolen And Worsted Systems Consumption

The weekly average rate of fiber consumption on the woolen and worsted systems in October was 4% below the September rate but 15% above that of October 1957. The weekly average raw wool consumption during October was 7,045 thousand pounds (scoured basis) or 5% below the September level, but 17% above that of October 1957. Consumption of apparel class wool was 7% below the September level, but 16% above that of October of last year. Consumption of carpet class wool was 1% below the

rate of the preceding month but 20% above the October 1957 rate.

Consumption of fibers other than raw wool averaged 6,248 thousand pounds per week, or 4% below the September average but 13% above October 1957. These figures include production of man-made fiber tow converted to top without combing. Total fiber consumption also includes this top production.

Finished Goods Production Down

A total of 9,776 million linear yards of cotton, silk and man-made fiber fabrics was finished during 1957. This was 5% below the 1956 figure according to figures recently released by the Bureau of the Census.

Cotton fabrics finished amounted to 7,705 million linear yards, or 5% less than the quantity finished in 1956. The 2,071 million yards of silk and man-made fiber goods finished was 4% less than the previous year's total.

Of the total fabrics finished, 5,951 million linear yards were finished for apparel uses. This was 6% below the 1956 level. The quantity finished for household uses decreased 7% from 1956 to 1,982 million yards in 1957. For other uses the quantity finished increased 2%.

Finishing plants located in South Carolina finished 29% of the cotton goods. North Carolina and Massachusetts followed with 15 and 14%, respectively. In the finishing of man-made fiber and silk fabrics, New Jersey was the most important state accounting for 38% of the total production, while Massachusetts and New York accounted for 14 and 10%, respectively.

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable

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"A Weird Combination Of Obstacles"

THE textile industry is making progress in getting across the irrefutable fact that it's being hamstrung by forces over which it has no control. An editorial in the December 13 issue of *The Saturday Evening Post* voices concern over the sorry plight of the cotton textile industry by conceding that "the threat to the . . . industry is a weird combination of obstacles before which any American industry might quail."

The editorial points to the "kept" price of American cotton, the import quota on raw cotton, the wide gap between American and foreign wages, the use of foreign aid to build textile industries abroad, and the inadequate machinery depreciation schedules in this country as some of the obstacles in point.

"Obviously we cannot build a non-scaleable tariff wall around the textile industry," the *Post* points out. "However, it does not seem unreasonable to suggest a compensating import duty on goods made from the cotton which we supply to foreign processors at a 20% discount. After all, American flour mills are protected against imports of flour made from wheat sold abroad for less than the support price. A little less enthusiasm for setting up still more textile industries abroad with American money would also contribute.

"There would still remain the wide difference between American and Asiatic wages in the affected industries. Probably there is no cure for this except an enforceable quota which should be liberal enough to give the Japanese and foreign industry generally a reasonable share of the market, but drastic enough to prevent disaster to the domestic industry."

Time magazine, on the other hand, in its issue of December 8, believes the industry's troubles stem primarily from its own shortcomings. It thinks the industry lags behind the general economy because, for one reason, it "is

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a clutter of 500 manufacturers, many of them small, inefficient and hampered by outdated machinery." It points out that "though the industry invested \$4.4 billion in new plants and equipment during the past decade, an estimated 65% of its machinery is still obsolete. . . . All the manufacturers are fiercely independent, have never joined in an intelligent drive to promote textile sales. Competition is so cutthroat that wholesale textile and apparel prices are only 93% of 1947-49 level, while other wholesale industrial prices stand at 126%."

Beyond these internal difficulties, *Time*, as did the *Post*, concedes that: "These woes are aggravated by the Government's absurd cotton-subsidy program, under which the Government dumps cotton abroad at 20% below U. S. prices. Foreign textile men then make the U. S. cotton into cut-price cloth that has won away U. S. markets both abroad and at home."

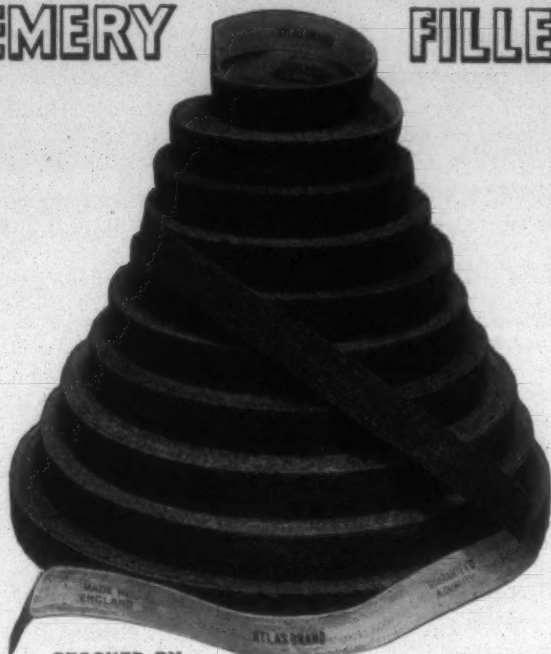
Time believes that better days are ahead, though, and credits the industry with moving ahead in the search for newer finishes and improved wash-and-wear characteristics. It closes by reminding that if the average male consumer in the U. S. spent as much of his income on clothing today as he did in 1929, sales of textile products would soar by some \$3 billion a year.

An Increased Minimum Wage?

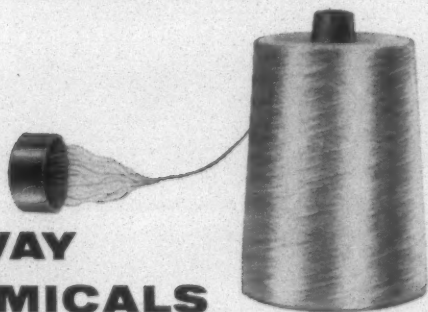
THE daily press made quite a to do over the December 2 announcement by Mr. Spencer Love to the effect that he advocated an increase in the present Federal minimum wage to a base of \$1.25 an hour. Some quarters have regarded this as an indication that Burlington Industries might soon come out with a blanket pay raise for its employees. But that's not what Mr. Love said.

On the contrary, he pointed out that the textile business being what it is today makes it impossible for it to grant a general wage increase at this time. The only way it would be possible would be through an increase in the Federal mini-

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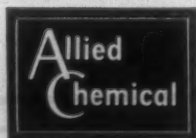


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EDITORIALS

mum. An increase in the base rate would put all textile producers in the same boat. An attempt at any individual action would merely result in those mills booting themselves out of line in competitive costs. No one firm can afford to serve as trail blazer in this respect regardless of how desirable the end result.

The significant portion of Mr. Love's remarks is his reference to the continuing threat of low wage foreign imports. As he put it, "A major danger in an increase in the minimum to \$1.25 is that it would further widen the enormous competitive advantage held by foreign producers. Realistic quotas on imports would be *even more necessary* to protect the jobs of American textile employees."

In other words, putting first things first, the textile industry, before it can move in the direction of wage increases, will have to obtain a practical measure of relief from the current unhealthy import situation before it can risk even greater losses in its own home market. Right now it's a question of saving jobs, not increasing pay rates. Certainly no employee in the industry wants to get a pay raise and a lay-off notice at the same time.

It's interesting to note that Mr. Love's remarks followed by some two weeks an announcement by the executive council of the Textile Workers Union of America, meeting in quarterly session in New York City, that the union was mapping plans for an industry-wide union campaign for a general wage increase. The union statement pointed out that the industry "is now entering a period of upturn in its fortunes. Market conditions have improved and activity has quickened. In the words of Halbert M. Jones, president of the American Cotton Manufacturers Institute, the textile industry's 'financial strength has never been greater' and its potential is at the 'strongest point in its history.'"

The union statement did not point out, however, that Mr. Jones was speaking of the long range outlook, and that the current volume of the industry, after all, is just now approaching the 1957 level. Nor did the statement make any reference to the fact that the industry still is grappling with the problems of foreign imports and two-price cotton. No mention was made either of the remarks that have been made by Senator Pastore (D., R. I.) concerning testimony given before the Senate Subcommittee on Interstate and Foreign Commerce. The fact that members of this subcommittee have labeled the textile industry as an ailing, troubled industry is apparently being ignored by the union even though testimony given before the subcommittee by union spokesmen has supported this diagnosis.

A day after it had announced its authorization for a campaign for a general wage increase in the textile industry, T.W.U.A.'s executive council came out with a resolution calling for an increase in the Federal minimum wage to \$1.25 an hour. Next came Mr. Love's remarks, these in turn being followed by varying reactions from a number of industry leaders.

Whether or not Mr. Love's statement on the subject stemmed from the announced intention of the T.W.U.A., we don't know. But certainly we agree with him and others who in a very practical way point out that any increase in minimum wages must be accompanied by more effective restrictions of textile imports. It's simply a matter of first things first.



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a very
**Merry
Christmas**

TEXTILE INDUSTRY SCHEDULE

— 1959 —

Jan. 26-29 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, Public Auditorium, Cleveland, Ohio.

Jan. 26-29 (M-Th)—**INTERNATIONAL HEATING & AIR CONDITIONING EXPOSITION**, Convention Hall, Philadelphia, Pa.

Feb. 9-10 (M-Tu)—21st annual meeting, **NATIONAL COTTON COUNCIL**, The Dinkler Plaza Hotel, Atlanta.

Mar. 12-13 (Th-F)—Annual Southern Spring meeting, **TEXTILE ENGINEERING DIVISION, A.S.M.E.**, The Clemson House, Clemson, S. C.

Mar. 19-20 (Th-F)—Spring meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION**, Clemson House, Clemson, S. C.

Mar. 19-21 (Th-Sa)—Annual convention, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

Mar. 26-27 (Th-F)—Spring meeting, **TEXTILE QUALITY CONTROL ASSN.**, North Carolina State College, Raleigh, N. C.

Apr. 2-3 (Th-F)—Annual conference on Electrical Applications in the Textile Industry, Textile Industry Subcommittee, **AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS**, Heart of Atlanta Motel, Atlanta.

Apr. 28-29 (Tu-W)—Technical Advisory Committee meeting and Board of Trustee Meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Apr. 29-30 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Fontana Village, N. C.

May 2 (Sa)—Spring general meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, (Slashing and Weaving), Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

May 12-14 (Tu-Th)—**COTTON RESEARCH CLINIC**, (sponsored by the National Cotton Council), The Grove Park Inn, Asheville, N. C.

May 18-23 (M-Sa)—**NATIONAL COTTON WEEK**, sponsored by the National Cotton Council of America.

June 18-20 (Th-Sa)—51st Annual Convention, **SOUTHERN TEXTILE ASSOCIATION**, The Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 10-11 (Th-F)—Fall meeting, **THE FIBER SOCIETY**, Textile Research Institute, Princeton, N. J.

Oct. 7 (W)—**CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Mayflower Hotel, Washington, D. C.

Oct. 8-10 (Th-Sa)—Annual national convention, **A.A.T.C.C.**, Sheraton Park and Shoreham Hotels, Washington, D. C.

Oct. 10 (Sa)—Fall general meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, (Carding and Spinning), Langdon Hall, Alabama Polytechnic Institute, Auburn, Ala.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

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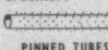
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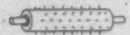
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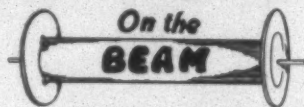
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